Lectures
ON
SYPHILITIC INOCULATION IN 1865.

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LECTURE III.

TREATMENT OF SYPHILIS.

It has been asserted that the best mode of treating syphilis is by the repeated inoculation of the same poison which originally produced the disease. To demonstrate this fact was the object of Dr. Boeck's visit to England. The interest of the profession has in consequence been keenly excited; and it is due to them and to the public that the evidence afforded upon the subject should be fairly given.

I. It has been shown in the two former lectures that the inoculation of the syphilitic poison on a person who has real syphilis is not much more easy than the inoculation of the vaccine poison on a person who has been properly vaccinated. In all the experiments which I have performed, where due precaution has been taken, I have failed to produce a lineal series of inoculations from an uncomplicated indurated sore; and Dr. Boeck, during his residence in England, did not, I believe, succeed in producing such a result in any one instance. Mr. Walter Coulson has, however, had two cases in which, after repeated inoculation, he has obtained well-developed pustules. In one of these, which he was kind enough to allow me to see, I was informed that the patient was inoculated with the matter from a soft chancre before the attempts were made to inoculate him with the secretion of his own indurated sore, and that in some of these attempts at inoculation the same lancet was used to take the secretions from both kinds of sore. The lancet was wiped, but was not washed after each attempted inoculation. Some of the secretion from the soft sore may therefore in this case have been left by the lancet on the hard sore, and thence removed so as to produce the supposed inoculation from the indurated chancre. Hence a possible source of error in this case; but in the second instance I could not detect any source of error. From the first of these cases Dr. Boeck continued to inoculate, and he also inoculated from some matter which he had received from Norway. This last-mentioned matter was unlike any that I have ever seen taken directly from an indurated sore. It was in considerable quantity, and presented all the appearance of pus derived from a well-formed abscess. If the matter had been collected from a large number of pustules, such as those produced in Mr. Coulson's cases, it would probably have presented the same appearance.

Now, whether matter of this description be a direct product of true syphilis, or whether it depend upon some dynamical change in the action of the part, it is essentially of a different nature, and formed by a different action, from any that naturally pertains to an infecting sore. This secretion, whether theoretically we suppose it to have its origin in syphilis or not, is practically not that which produces syphilis. In the change of action which has taken place during its production it has lost its sting, so far as its power of producing an indurated sore is concerned; and it has also lost, as far as our present evidence goes, its power of infecting a patient's constitution.

On the other hand, it has gained a contagious property which it had not before, and can be inoculated with a rapidity and certainty quite different from that which was possessed by the natural secretion of the part upon which it was elaborated. It is therefore changed, not only in appearance, but in vital power. It is different in its immediate effect and in its subsequent results. It, in fact, possesses all the characters of the secretion of a soft chancre, and none of those characteristic of an indurated sore. Whether therefore, I say, it be derived from an infecting sore originally or not, it must be regarded as resulting from an essentially different action, and as possessing qualities essentially different from the secretion of the infecting chancre. Practically, therefore, the secretion from a pustule and the secretion from an indurated chancre are the results of different affections, and it is evidently incorrect to talk of the one as of the other, although the two should have been produced in the same part, or originated on the same spot.

The very conflicting statements made about the auto-inoculability of the secretions of the indurated or infecting sore leave ample room for the suspension of our judgment, to say the least.

An Italian surgeon has quite recently put the subject of inoculation to the test of observation and experiment, and his results are totally opposed to those obtained by Drs. Boeck and Bidenkap.

Dr. Amilcare Ricordi ("Sull' Irreinoculabilita delle forme di Sifilide;" extracted from the "Annali Universali di Medicina," vol. clxxxiv., Fasciculus of January, 1866,) has only this year published his paper. His object was to test the truth of the assertions of those syphilographers who declared that they employed the purulent secretions from the indurated or true syphilitic sore for the purposes of syphilization, and to determine at the same time the truth, or otherwise, of an hypothesis put forth by M. Langlebert as to the different properties of the serous and purulent fluid of syphilitic lesions.

In syphilization if the indurated chancre, or mucous tubercle, does not yield pus, it is made to do so by slight artificial irritation, and the secretion is said to acquire new and peculiarly active properties, which adapt it for inoculation.

The experiment is an eminently simple one, and Dr. Ricordi instituted a series of observations with pus obtained from thirty-six infecting ulcers, and forty-three times with that obtained from ulcerating mucous patches. The fluids inoculated were manifestly purulent, he says; yet the inoculations were always followed by a negative result. Prof. Pelizzari, in 1863, he states, also made a similar series of experiments, which led to similar conclusions. Occasionally, although very rarely, an inflammatory reaction certainly ensued after the inoculation, but the morbid phenomena were never more than might fairly be ascribed to the traumatic effect of the instrument used, and the slight irritative action of the purulent matters inserted, for the artificial affection always disappeared spontaneously in a few days. How then, asks Dr. Ricordi, are we to reconcile the experience obtained at Christiania with the want of success at Milan and Florence?

I am further tempted to make a short and pertinent extract from Dr. Ricordi's pamphlet. Dr. Gustavo Bargioni communicated to Prof. Pelizzari the results of Bidenkap's experience in Paris. Dr. Bargioni personally learnt from M. Follin and his interne, M. Bouchard, that Bidenkap made between seventy and eighty experiments with the secretions of the indurated sore, but he never succeeded in producing a characteristic soft ulcer. The size of the lancet employed by Bidenkap, and his mode of using it, were open to some objection, as it appeared to MM. Follin and Bouchard, and they requested him to employ a needle such as is used for vaccination. This Bidenkap declined to do, although the interne had perfectly succeeded with it in inoculating the pus of a soft venereal ulcer.

A circumstance of some interest was the following:—There was a patient present suffering from a well-marked "mixed sore," so-called. M. Follin raised some objections to the pus of that ulcer being employed. Bidenkap, putting aside the objection, desired to employ the pus of this ulcer, and the result of the inoculation was such as M. Follin had predicted—viz., a characteristic soft ulcer.

Not to follow Dr. Ricordi tediously through his other observations, I will only remark that this observer succeeded in inoculating some of the animals with the pus of a soft venereal ulcer, but he failed entirely to engraft syphilis or any characteristic lesion upon them by inoculation with the virus of the hard chancre.

If an action be superinduced upon a sore which cannot be produced by any chemical or mechanical irritation, it shows that some fresh morbid process has been set in operation, and it would be manifestly unjust to attribute any results produced by inoculation from such a source to the influence of the secretion of the original sore alone. To assume this would be to admit a source of error which would run through the whole series of experiments performed.

Where a source of fallacy may be thus seen to lie at the origin of every series of inoculations, which unless guarded against may readily run through the whole, it is of the highest importance, in a scientific point of view, that the greatest precaution should be used in performing the first inoculation of the series, and especially that a fresh lancet, or a lancet that

had been placed in boiling water, should be used. In the practice of Drs. Boeck and Bidenkap this precaution is not usually taken. When in a field of wheat we see here and there some oats, however much we may be assured that wheat only was sown, yet we feel satisfied that, either by accident or by seeds left from a former crop, or in some way or other, each blade of oats had its origin in a seed of the same nature. If allowed to grow together, a mixed seed would be produced. If the seeds from this were again and again sown in a soil in which the wheat would not grow, we might in time get a prolific crop of oats, but we could never suppose that the oats had originally been derived from the wheat.

That in syphilitic inoculation we have to do with at least two distinct actions may be proved, not only by experiment, but also by practical observation. Most surgeons of experience will be able to say whether a particular sore will or will not be followed by secondary symptoms. In civil practice, however, the correctness of the diagnosis is difficult of absolute proof; but in military hospitals the facts can be tested with the greatest accuracy. Dr. Marston has been good enough to furnish me with the following portion of the record which is always kept in the hospital to which he is attached. The nature of the disease is entered when the patient is first in hospital for his local disease, and the result is noted at a future time.

Soft sores.	*Followed by secondary symptoms.*	*Doubtful.*	*Secondary symptoms.*	*Infecting.*	*Secondary symptoms.*
162	1	21	10	64	57

By the term "soft sores" is understood cases in which the ulcers possessed the character of the soft sores throughout—not complicated with, nor followed by, induration of the sore, glands, or lymphatics.

By "doubtful," it is to be understood that the character of the affection was not noted, or that it was marked "syphilis" (?), "infecting" (?), "non-infecting" (?), &c.

By "infecting" is to be understood the presence of induration in chancre, its cicatrix, glands, or lymphatics; or where the *true* infecting chancre complicated or followed soft sores, &c.

Considering the number of causes which may tend to complicate the disease in a soldier's life, it must be acknowledged that the diagnosis made at the commencement of the cases included in the foregoing table was verified in a remarkable manner by the subsequent results; and it follows that any statistical statements which do not recognise this practical distinction are comparatively valueless. If in the present day a particular remedy were vaunted as a remedy for fever, and its virtues were attempted to be proved by statistics which did not distinguish between different kinds of fever, we should consider the evidence most unsatisfactory. At different times a great variety of remedies have been held in repute as possessing the power of curing syphilis: sarsaparilla, opium, ammonia, nitric acid, guaiacum, hemlock, and the muriate of barytes, have all in their turns, as mentioned by Sir Benj. Brodie, been supposed to have this power. But, as far as primary syphilis is concerned, the evidence upon which the reputation of these different medicines was built entirely fails when we consider that they were given in a very large proportion of cases which would have got well speedily without any medicine at all; and that these cases were included in the list of those supposed to have been cured by these different drugs.

With regard to the treatment of primary syphilis, Dr. Boeck has given in his work an elaborate table of the time required for its cure by different remedies; but inasmuch as no distinction is drawn between the indurated and the soft chancre—a distinction which Dr. Boeck does not admit,—these statistical tables lose much of their value in the eyes of those who believe that the scientific treatment of every case must depend upon an accurate diagnosis with respect to this very point.

II. During Professor Boeck's stay in England he treated, as he informed me, nineteen patients affected with constitutional syphilis in the female Lock Hospital by repeated inoculation. Some four or five other cases may have been subjected to the same treatment, which, not having been continued from various causes, are not included in the above-mentioned number. Of these nineteen two only were supposed to have obtained an immunity against syphilitic inoculation when Dr. Boeck left, and these two, as mentioned in a previous lecture, I successfully inoculated in Dr. Boeck's presence. Fourteen of these nineteen still remained in the hospital, I believe, on the 23rd of February, two months after Dr. Boeck had left. These women submitted to the treatment under the idea that they would in future not be liable either to receive or to communicate disease. Very few other patients, either in hospital or in private practice, have hitherto been induced to undergo the treatment by syphilization, and of those who have been thus treated one death was recently mentioned at the Medical Society to have occurred; and another case in which the treatment was attempted has lately died in the Lock Hospital.

It has fallen to my lot to see three male patients only who were supposed to have been cured by syphilization.

The first of these became a patient of my own after he had undergone the process of syphilization. He then had an enlargement of the left parietal bone, and it was for this and for other affections of the bones that he had been treated. This patient's father had died of what was called softening of the bones, and inasmuch as the symptoms did not appear in this case for more than a year after the supposed inoculation, I must confess that the case did not seem to me to be one of syphilis.

The second case was one which I had an opportunity of showing to the Fellows of the Royal Medical and Chirurgical Society. It was one of extensive ulceration of the throat. All the brothers and sisters of this patient had died of consumption, and several of the Fellows of the Society examined this patient with much interest. Among others, Dr. Wynn Williams examined his chest carefully, and gave it as his opinion that he had scattered tubercles over the upper part of the left lung. In this case, again, the symptoms, according to the patient's history, did not appear for twelve months after the supposed infection.

Now, I believe that the statement of Ricord is in accordance with that of nearly all who have seen much of syphilitic diseases—namely, that where the disease is allowed to take its natural course six months never elapse without some secondary manifestation. It is true that Ricord says—and in that I would quite agree—that where specific treatment is used for the primary disease the secondary manifestations may be delayed for a very considerable period; but in the two cases now referred to no specific treatment had been used for the primary disease, and therefore they cannot be regarded as having come within the recognised law with respect to the development of syphilitic manifestations.

The third case was that of a gentleman from Norway, whom Dr. Boeck was good enough to introduce to me. He was apparently healthy, but of not much physical strength. I counted on his body the marks of two hundred inoculations. These presented different shades of red or livid hue, and were of the size of a fourpenny-piece and smaller. This patient was originally under the care of M. Auzias Turenne, who has had the great kindness to send me an account of the early development of the disease. M. Auzias attended him from the end of February to March 18th. The affection commenced on the glans penis, and particularly on the prepuce. On these parts eight or ten papules first showed themselves, very small, very flat, and near each other. Some of these, from which the epidermis was detached, were very red and smooth; the others were pale. As the cuticle was detached from these last, their surfaces secreted a serous fluid, which afterwards became very copious. The papules soon became confluent, excoriated, ulcerated, and raised towards the prepuce by a cartilaginous induration, which appeared gradually. Several glands became indurated in each groin, and soon some small red pimples appeared on the skin of the penis, in the groins, on the thighs, and on the lower part of the stomach. This was followed by fibrous and muscular pains in the head and limbs, and a general eruption. M. Auzias doubted as to the nature of the affection in its origin, and it certainly did not follow the course which syphilitic infection generally does.

That Professor Boeck had not some better results to show after a residence of four months in England was not, perhaps, attributable to him. He expected that sixty-five patients would have been placed at his disposal, under the sanction of Government, from the time of his arrival; but, as it happened, he had an opportunity of treating such cases only as were sup-

plied to him from private sources. It would be manifestly unjust to judge Dr. Boeck's system by the results thus furnished; but still we are bound, as students of facts, to state fairly the results obtained under the circumstances.

If we have reason to be disappointed with the evidence on the subject of the so-called syphilization here, we have, on the other hand, extensive and most accurately kept tables in Dr. Boeck's great work, which furnish abundant proof that the symptoms of constitutional syphilis will disappear under the continued irritation kept up by repeated inoculation. It is urged in favour of this plan of treatment that it prevents the internal organs of the body, and the bones, from becoming affected with syphilis; and that the relapses after such treatment are comparatively rare. We are not, perhaps, in a position to judge of what means are at Professor Boeck's disposal in order to ascertain the number of relapses which take place. But in this country it would certainly be no indication of the number of patients permanently cured if we were to calculate the number who voluntarily returned after a four or six months' course of what must appear to them an ineffectual treatment. With regard to absence, under this plan of treatment, of diseases of internal parts, I can readily believe that the continued irritation on the skin would have the effect of preventing the morbid manifestations elsewhere; for I have observed the same fact with regard to the use of the calomel vapour bath in primary syphilis. The continued action that this maintains on the skin has apparently the effect of preventing the deeper structures from becoming affected: at all events, I may state very positively that out of a large number of cases treated both in hospital and private practice I have seen no severe complication of the deeper structures where the calomel bath has been properly used for primary syphilis. We have no means of instituting a comparison with regard to the efficacy of the treatment by repeated inoculation, and by the calomel vapour bath, respectively, with regard to primary syphilitic sores; because the former plan does not appear to have been tried before the evidence already existed of the patient's constitution having become affected; and if it had been tried, the conclusion, as already explained, would have been most unsatisfactory so long as the distinction between the infecting and the non-infecting form of the disease was not kept in view.

In secondary syphilitic affections we have, however, the means of instituting a comparison between these two methods of treatment. I have carefully gone over ten of the case-books kept at the Lock Hospital during the period that I held the office of surgeon to that institution, at a time when the calomel bath was frequently used. Excluding the cases which left the hospital before they were considered to be cured, on the one hand; and cases complicated by some other disease, not venereal, or which required some operation to be performed, on the other; these ten case-books give the following results:—

Seventy-eight men were treated for constitutional syphilis by the calomel vapour bath, and discharged as cured, during 426 weeks, giving an average of a little more than five weeks and three days for each case.

Eighty-seven women were treated for constitutional syphilis by the calomel vapour bath, and discharged as cured, during 605 weeks, giving for each case an average of something less than seven weeks. Many of these women were received into the asylum and remained under observation for different periods, not exceeding two years. The reason why the period of treatment was longer in women than in men was, that the proportion of cachectic cases in women (many of whom were received in a state of great destitution) was larger than in men.

It is not easy to get patients in this class of life to remain in hospital for primary affections, especially when attended with little local inconvenience, and the number of those who were admitted, and remained until properly discharged, for primary infecting sores, was therefore small.

I find that sixteen men were thus treated by the calomel vapour bath, and dismissed as cured, during a period of eighty-nine weeks, giving an average for each case of five weeks and four days.

Thirty-two women were similarly treated during 158 weeks, giving an average for each case of something less than five weeks.

Taking all these figures together, we have 213 cases treated during 1278 weeks, giving an average for each case of exactly six weeks.

If we compare with these figures the length of time employed in the process of repeated inoculation, we find 252 patients mentioned by Dr. Boeck ("Recherches sur la Syphilis," p. 471) as having been treated during 33,828 days, which gives for each case an average of rather more than nineteen weeks. The result which Professor Boeck gives with regard to the time required for the treatment of this disease with antimonial plasters by "derivation" is still more unfavourable. Small antimonial plasters, in these cases, were placed on different parts of the body, so as to keep up a continued series of small ulcerations. Eighty-five patients were treated for constitutional syphilis in this way, and, on an average, the treatment of each patient occupied a period of twenty-six weeks.

Professor Boeck mentions (p. 463) 537 patients as having been treated by calomel internally administered, each case having occupied, on an average, rather more than eighteen weeks and a half. He also mentions 3200 altogether as having been treated by different proportions of mercury (p. 470), each case, on an average, having required very nearly eighteen weeks. Out of these 3200 cases 108 deaths occurred.

Dr. Boeck gives some elaborate tables, showing the results of other modes of treating syphilis. The treatments by purgatives and iodide of potash are considered. It would prolong this lecture beyond its necessary limits to consider the conclusions at which Professor Boeck's figures point. Suffice it to say that the results obtained are not favourable with regard to any of the plans enumerated, and in none does the time occupied in the treatment appear to have been anything like so satisfactory as that which the statistics above given show to be required for the treatment of the disease by the calomel vapour bath.

The calomel vapour bath has, moreover, the advantage of being applicable where other means of treatment, including mercury internally administered, have been used, and failed. It may be given where the strength of the patient has been very greatly reduced, provided there be no organic disease of internal organs.

CASE.—A major in the army, returning from India, consulted me, saying at the same time that he had tried all kinds of remedies, and did not expect anything could do him good. He had eruptions on various parts of the skin, and large nodes on the forehead and arm. He was so debilitated that he kept his bed. He was placed on a course of calomel baths, and ordered a pint of the simple decoction of sarsaparilla daily. In two months his symptoms had all disappeared and his general health was restored. I feel confident that had any symptoms returned in this case I should have been informed.

CASE.—An officer had undergone a great variety of treatment, and was reduced to that state of debility that he was quite unfit for duty. He had a large node on the back of the head, and other symptoms of long-standing constitutional syphilis. This patient was placed on the same treatment as that adopted in the preceding case; and in between two and three months his health was entirely restored, and he could ride any distance without inconvenience. I had the satisfaction of hearing that this gentleman continued well several months after he had discontinued his treatment.

I might record a great number of similar cases did time permit. But I must now say something about the mode of the administration of the calomel vapour bath, especially with regard to one or two points which I have reason to believe have as yet been very imperfectly considered by our profession.

The object of depositing the vapour of calomel on the skin is, first, to excite an action there, and, secondly, that something may be absorbed from the powder thus deposited. In order that such absorption may take place, it is necessary that the powder should be allowed to remain on the skin. It is also necessary that the skin should be soft and clean. If the skin be covered with dry scales, or if any grease be allowed to remain on it, it is obvious that its absorbing power must be greatly interfered with. In order to ensure the proper action of the skin, I generally recommend that a patient should take a hot-air or vapour bath first. When a free perspiration has been produced in this way, the skin is wiped dry, and a clean surface presented for the action of the calomel. Without this precaution, many baths may sometimes be taken without producing any sensible effect. On the other hand, when the skin is thus prepared, its absorbing power is often at once perceptible. A patient of mine, who has for years kept his skin in the most perfect condition by means of the hot-air bath, always shows the characteristic influence of mercury on the gums if he takes a calomel bath (from a scruple to half a drachm) two days in succession. This patient always inhaled as little of the vapour as possible. I may here mention that the action of the bath is materially assisted, in the majority of cases, by

the inhalation of a certain quantity of the vapour; but this is by no means a substitute for the action of the calomel on the skin.

Messrs. Pollard, surgeons, of Alfred-place, Brompton, have now for a long time very efficiently carried out my idea of the way in which the calomel bath should be given. They have had some rooms fitted up, in which a patient may take a hot-air bath, or the first part of a Turkish bath; and when the skin is acting freely, the patient is rubbed down and placed in the calomel bath. I might give many cases where patients have recovered in a very short time under this mode of treatment. It is peculiarly applicable to cases in which the skin is thickened and scaly, either naturally or from disease. Two or three years ago, a patient was sent to me by my friend Dr. Marston, of the Royal Artillery. He had been under Dr. Marston's care, and I need not say that he had thus as good a chance of recovery as he could possibly have had from the administration of ordinary remedies. The body and limbs of this patient were covered with one mass of thick scales. Occurring in a young man, it was the most marked case of inveterate psoriasis which I have ever seen. He could not move without pain, and was quite incapacitated from doing his duty. This patient was requested to go to Messrs. Pollard's establishment, and to take daily a sweating bath first, and a calomel bath afterwards. In about three months I had the satisfaction of seeing this patient's skin quite clean, and his general health restored. He has since married, and has suffered no further inconvenience from his former most troublesome complaint.

In concluding the comparison between the treatment of syphilis by the calomel vapour bath and by syphilization, I would call attention to what appears to me to be a very important aspect of the matter—viz., the *practicability* of syphilization as a mode of treatment in this country. The method unquestionably makes great demands upon the time and patience of the sufferer and the surgeon, but particularly upon the former. We may obtain a rough approximation as to the time consumed perhaps by fixing three months as the minimum and eight as the maximum period over which the inoculations will extend. These inoculations are sometimes "terribly painful." During the whole period the patient must attend or be seen every third day for the purpose of being inoculated. The surface of his body will be the seat of numerous small ulcers and pustules, the marks of which, be they small or great, he will continue to bear upon his person afterwards. The majority of cases of syphilis, as witnessed in persons of average health and constitution, certainly recover in time under mercurial treatment without ever presenting that formidable train of symptoms which have very unjustly been ascribed to its use. Even if we should admit that mercury and other remedies only remove the manifestations, leaving the patient subject to an outbreak of syphilis at subsequent or remote dates, and that syphilization is not liable to this objection, still will not the sufferers, under ordinary circumstances, be more likely to prefer incurring the risk of subsequent relapses, or that of some remoter internal lesion, to undergoing a process of cure which will consume so much of their time, demand so much of their perseverance, and leave such traces—indelible they may be—of its action?

Again, the practice can hardly be capable of general application so long as the number of Lock hospitals and the sources for the supply of the chancre-matter is limited. So long as the inhabitants of country towns or villages may contract the disease, just so long will the pressing necessities of business, family, poverty, and other causes require that syphilitic patients shall be treated at their places of residence. In order to carry out syphilization effectually, not only will an abundant supply of matter be required, but supplies from fresh sources will be needed likewise in order to attain the requisite immunity, or, it may be, to effect the cure. Within the walls of Lock and other large hospitals and in those of our public services there will, of course, be no such difficulties as must be felt elsewhere. But in private the treatment by syphilization would tend to bring these diseases more and more under the care of specialists. Let the power, the superior efficiency, of syphilization be never so firmly established, there are difficulties attending its application which it behoves us to consider as men of the world, as members of a practical money-getting nation, where men are so extremely jealous of their time.

Jenner warned the profession in his day against the belief that every successful inoculation with matter taken from a vaccine vesicle was necessarily the real vaccine disease; and he especially notices that after a vesicle had suppurated it was very liable, upon reinoculation, to produce an affection which was not followed by the legitimate results of the vaccine disease upon the patient's constitution. To apply the warning which Jenner gave to our present subject may not be out of place. It no more follows that the successful inoculation of matter from the surface of an indurated sore produces real syphilis than it follows that the production of a pustule by inoculation from what was once a vaccine vesicle necessarily communicates the genuine vaccine disease.

The transmission of a poison, and of an action produced on a poisoned part, may be clearly distinct; and to conceive them to be necessarily the same would be to give up a distinction which Jenner clearly and particularly recognised.

We conclude—

1st. That no evidence has hitherto been adduced satisfactory to the profession that the infecting form of syphilis can be inoculated upon a patient who is at the time the subject of constitutional syphilis.

2nd. That both from a soft sore, and also occasionally from the surface of an indurated sore, matter may be taken which may be made to produce a number of local specific ulcerations having the characters of the soft chancre.

3rd. That during the continued irritation of such ulcerations the manifestations of secondary syphilis will disappear.

4th. That the time required for the treatment of syphilis in this way is so long, and the inconveniences attending it are so great, that it is not in any degree likely to be adopted in private practice in England.

ON DR. RICHARDSON'S NEW MODE OF PRODUCING LOCAL ANÆSTHESIA.

BY LEONARD W. SEDGWICK, M.D.

THE importance of Dr. Richardson's new mode of producing local anæsthesia can hardly be over-rated. It promises to supersede chloroform in most of the minor, and many, perhaps, of the major, operations of surgery. Its possibilities are so extensive, and its progress is so rapid, that it may be well to take stock of our possessions, even at this early period after its introduction. Having, through the kindness of my friend Dr. Richardson, been a witness of most of his work in the matter, having taken part in the experiments which are still progressing, and being almost the first person who operated with its aid, I venture to lay before the readers of THE LANCET the following comments.

The apparatus may be shortly described as a bottle to contain the ether, a tube to produce the spray, and a bellows to supply the motive power. The tube is double, passing through a cork which fits tightly into the neck of the bottle; the inner tube reaches the bottom of the bottle, and has a very fine bore for the passage of the ether. Surrounding it from the cork outwards is a wider tube, terminating, a short distance beyond the outer end of the ether-tube, in a nozzle with a very small aperture. A perforation in the under part of the cork allows the outer tube to communicate with the interior of the bottle. To an arm of this tube is attached the same bellows as in Dr. A. Clark's spray-producer. The bellows being worked, air passes into the outer tube, whence it is forced outwards through the nozzle, and downwards through the apertures in the cork into the bottle. The air exerts great pressure on the contained fluid, and presses it up the inner tube, on escaping from which it is first broken into rough spray by a silver pin loosely fitted into the upper end of the tube, and then finely pulverized by the powerful current of air overtaking it, and propelling it with great force through the nozzle. The spray quickly cools the skin, and in from five to forty seconds (depending much on the temperature of the part and more on the fluid employed) freezes it; a deadly whiteness spreads with startling suddenness over the surface, and cutting produces no pain. Some fluids, as chloroform, do not produce whiteness, but a copious deposit of hoar-frost settles on the part.

Dr. Richardson has had a large series of single and multiple jets made, and the practical result so far is that for most ordinary purposes a single jet is the best and handiest. It is sufficient to freeze some two or more square inches of surface; and when once blanching of the skin has taken place, it is easily maintained for any length of time. When it is necessary to open a long sinus, or when, for any purpose, the skin inci-

sion is long, it is convenient to use a series of tubes arranged in line; and when there is much hæmorrhage, the amount of heat produced by the outpouring of blood may render necessary the use of a large quantity of ether, distributed by several jets arranged concentrically. When the patient is lying on the back, it is advisable to have the tube sharply curved on itself, so that there shall be no necessity to tilt the bottle in order to direct the spray on to the part, and by this means get the end of the tube out of the ether and so cut off the supply. The importance of these latter suggestions was very manifest in a case of removal of the breast at St. Mary's Hospital, where Dr. Richardson applied the ether spray himself. Other forms have been made for him, the value of which further experience will show. In long operations the working of the bellows tires the hand, but there will be in all cases at least one relay able to accomplish this purely mechanical process. I may add that the squeeze should be steady, hearty, complete, and made about once a second.

The quality of the ether is of vital importance, and it should boil at about 92° F.; for with as pure an ether as this, blanching is much more rapidly produced, and there is less unpleasant sensation in the process. I have taken part in many experiments which Dr. Richardson has made with various other fluids, including some of the hydrocarbons from photogen, and, as yet, pure sulphuric ether, of the quality supplied by Mr. Robbins of Oxford-street, produces the best and quickest results. But it should not be forgotten that the essence of the anæsthesia is cold, produced by the rapid evaporation of a highly volatile fluid, and not any narcotic property residing in the substance employed. A cheap unirritating fluid, easily prepared and constant, may yet be found that will supersede sulphuric ether; but this will not alter the principle of the process, or detract from the credit due to its discoverer.

When the spray is directed to any part at the proper distance, an inch and a half, much cold is felt, and, at the period of blanching, some prickling, which in some sensitive persons amounts even to a sharp pain. The more rapidly whiteness is produced, the less unpleasant sensation there is; and if, from the impurity of the ether or any other cause, this symptom is delayed, much dull aching is felt. The tissues, when frozen, are hardish and cut brawnily. When the spray is removed they quickly, and in most cases painlessly, regain life. There is no sloughing, only a little redness, and very occasionally some œdematous swelling and prickling, remaining for a longer or shorter period. This rapidity of return to a normal state, as well as the rapidity of the freezing process, is clearly the great reason why there is no sloughing following this mode of producing local anæsthesia by cold. An instructive example of the great advantage this mode possesses over the ice process was shown in one of my experiments. I was trying if the interposition of a thin metallic plate would diminish the slight smarting felt often on the occurrence of the blanching. I used a leaf of tinfoil, laid dry on my arm at first, and then one gummed to it; and, not having sufficiently dried the latter, I found a layer of ice close to my skin. The redness resulting from the freezing through dry tinfoil passed off, as is usual, in a few hours; but the redness, pain, and swelling produced by the ice lasted, and troubled me for several days.

After these general observations, I will now shortly summarize the results obtained in practice, and direct attention to some of the conclusions to be gathered from them; and for this purpose I am not only able to draw upon published cases and my own experience, but have also been kindly allowed to use Dr. Richardson's extensive observations.

The most important operation yet performed has been ovariotomy, by Mr. Spencer Wells. Here the skin incision and the application of the clamp were painless, but the separation of adhesions was somewhat painful, as the spray was not applied fully to them. This is a most encouraging result: the most painful part of the operation, the skin incision, is fully under control; and further experience only can determine whether it is safe to freeze adhesions to important structures such as the diaphragm, liver, or intestines.

Three cases of removal of the breast have occurred, of which two were quite successful, the other not so; but in this case, which happened to Dr. Richardson, a mechanical deficiency in the spray-producer and the great vascularity of structures combined to overpower the cold produced.

Three cases of fistula have been operated on without pain; and one was painful, but only in those parts where the spray had not been applied. In a case of division of the sphincter ani and one of removal of a polypus of the rectum, perfect insensibility was produced; but in a second case of division of the sphincter the result was not satisfactory.

Fatty tumours have been removed from over the false ribs and the shoulder, a doubtful scirrhus from the sole of the foot, and six sebaceous tumours from the face and head, without any pain.

Three cases of amputation of the finger have been painless, and one somewhat painful. Supernumerary parts have been three times cut off from the digits with success. Three toe-nails have been removed. A carbuncle has been freely incised, and nitric acid twice applied to very sensitive parts with comfort. The operation for phimosis has not given pain, and ten deep abscesses and two whitlows have been cut into when frozen without the knowledge of the patient. One of the whitlows was in its early stage, very red, tense, and acutely painful; an incision of an inch long was made, and the next day it was almost well. Two cases of operations on the skin have been most successful, and several deep sinuses have been opened without pain; in one case in which I applied the spray there was some unpleasant sensation from the structures not being sufficiently frozen. A case of excision of the eyeball by Mr. Ernest Hart has been reported, where the pain was to a great extent alleviated. And lastly, some two hundred teeth have been extracted without pain in by far the larger number. In one case Dr. Richardson produced a most satisfactory degree of numbness in the removal of a wisdom tooth by freezing the adjoining structures from the outside.

Considering that these details include the earliest operations, the results must be considered most satisfactory; and from the progress that has already been made, it cannot be doubted that as a wider knowledge of the details of the process and a further experience of its application are gained, the cases of non-success will be greatly diminished, and perhaps a new fluid acting more quickly may reduce or prevent altogether the unpleasant, and in some persons sharply painful, sensation produced during blanching. I have not seen or heard of any material interference with the healing process, except in one case where some sloughing occurred; but as the wound had to be opened the next day to stop bleeding, it is at least doubtful to what cause the mischief was due.

But medicine gains as well as surgery. One case of lumbago, and one of rheumatism of the shoulder, have been instantly relieved by this process; and four cases of neuralgia have been for the present cured. Even whilst writing this, I have applied the spray to the forehead in a case of neuralgic headache, and to the sacral region for a similar pain there, with marked advantage. Hence, without in the least degree claiming for the process the character of a universal panacea for superficial pain, I look with hope to the prospect of wide use in many troublesome disorders which, to cover our ignorance, we call neuralgic; and also in such brain affections, especially in children, where rapid and extreme cold is desired.

But I will refrain from speculations, and briefly mention a few suggestions which lie on the surface of the question. If the operation is not very superficial, the part should be well frozen, and it should be white for a minute or more before any incision is made. The surgeon should cut slowly, and the spray should be kept going immediately before the knife. He should remember the difference between frozen and normal parts, and work accordingly. And, lastly, if the operation be lengthened, cold water should be used to delay slightly the recovery.

The more one sees of Dr. Richardson's most important discovery, the more one learns the necessity of attention to such minutiæ as the perfectness of the tubes, the purity of the ether, and the accommodation to differing circumstances; and the more one feels that the invention contains within it the power of a yet larger growth, and that its author deserves the lasting gratitude of the profession and those whose miseries we try to alleviate.

Hinde-street, April, 1866.

P.S.—Since the above was written, I have had the gratification of seeing the complete success of ether spray in Dr. Greenhalgh's important operation of Cæsarean section. Many other operations have been painlessly done, and I have used it with marked success in a case of spinal hyperæsthesia, and one of lumbago. On the other hand, some failures are said to have happened, some of which have been clearly attributable to the imperfection of the apparatus employed, and others, it may be, to the unfitness of the cases for the use of narcotism by cold. Widely applicable as this mode of producing painlessness is, it needs, as usual, two conditions for its success: a perfectness of the mechanism employed and a fit selection of cases.

INFORMATION has been received of the safe arrival of Dr. Livingstone at Zanzibar.

DESCRIPTION

OF A

LARGE FIBRO-AREOLAR TUMOUR OF THE THIGH.

BY T. CARR JACKSON, ESQ., F.R.C.S.,

SURGEON TO THE GREAT NORTHERN AND NATIONAL ORTHOPÆDIC HOSPITALS.

ELEPHANTIASIS, as developed in the natives of tropical climates, and, according to Delpech, in some of the countries of Europe—viz., Rousillon, Low Provence, and some parts of the east coast of Spain and the Greek Archipelago—is of rare occurrence in this country. The disease most resembling, and which, in fact, is often confounded with it, being an immense hypertrophic growth of the areolar tissue, constituting formidable tumours and enlargements, occurring for the most part in the organs of generation and intermuscular spaces. In the year 1846 I saw Dr. Esdaile, at one of the hospitals in Calcutta, remove a growth of this kind (scrotal), which, if my memory serves me, weighed over 100 lbs.; and in the year 1862 I had the honour of assisting my accomplished friend, Dr. Wiblin, of Southampton, to remove a similar tumour, the particulars of which he has published in the "Medico-Chirurgical Transactions," vol. xlvi.

A loose and succulent stroma, infiltrated with serum, and consisting of the meshes of the original areolar tissue, is the essential pathological feature of this morbid structure, producing the appearance of an exaggerated anasarca, of blubber-like consistence. I have not, however, been able to find in the writings of authors any description of the lymphatic complication which is so abundantly manifest in this case, forming a prominent feature in its history, and demonstrating that the œdema of the areolar tissue, and its prodigious serosity, are but effects of obstruction to absorption.

A. P——, aged seventeen, from Flimwell in Sussex. Father and mother alive, both over fifty. Three brothers and one sister living. Twelve children have died, causes not known. This patient, one of the youngest, is tall, flabby, and pallid; has light hair and blue eyes—the "strumous aspect." He declares himself to have been quite well up to the onset of his present ailment, which dates from six years ago; his mode of life up to that time being that of the poorer class, living upon bread, butter, and cheese, meat about twice a week, and a fair share of beer. The first unusual circumstance had its seat at the lower part of the belly. Here a large abscess formed, which laid him up three months in bed, and was attended with much constitutional disturbance, the local symptoms not being very marked as regards pain. The abscess extended right across the bottom of the belly, from one superior spinous process of the ilium to the other; and has left traces of scars, one in the median line, two inches long, about two inches above the level of the pubes, and two minor ones on the left side, about the same level. The abscess discharged abundantly, and left the boy extremely weak. Two or three days after the abscess got well the left thigh began to swell from the knee to the groin. This enlargement has been steadily increasing ever since, not attended by any particular pain, and only on about three occasions for two or three days together has it laid him up, and then owing to pretty severe pain in the region of the groin. For nearly a year it has, to use his own words, "run, *and the bunches come then.*" The sensibility has been, and is now, almost equal to that of the healthy limb. He works on a farm, hop-digging, cattle-tending, &c.; and the enlargement does not at all interfere with his getting about, nor does it otherwise inconvenience him from its weight.

Description of the limb.—The left limb is considerably enlarged in its whole circumference, being much arched in front. From behind, the thigh appears square; it does not taper off towards the knee on the inner side like the healthy thigh; but the tissues just above the internal condyle of the femur are so very much hypertrophied as to widen out this part of the limb greatly. The swelling is well defined by Poupart's ligament above.

Measurements of Healthy Limb.	*Measurements of Diseased Limb.*
1. Circumference over the most fleshy part of rectus, 18 inches.	1. Circumference over the most fleshy part of rectus, 25 inches.
2. Just above patella, 12 inches.	2. Just above patella, 18 inches.
3. From Poupart's ligament to upper border of patella, 14½ inches.	3. From Poupart's ligament to upper border of patella, 18 inches.
4. Below the knee, 11 inches.	4. Below the knee, 14 inches.
5. Ankle, 7¾ inches.	5. Ankle, 8¼ inches.

He is quite certain that the swelling of the leg below the knee is recent, and states that the limb has measured 28 inches in its circumference.

There is a notable difference in colour, and some redness, in part due to staining, in part to actual congestion, and a much larger amount of hair on this as compared with the healthy limb. The inner and front aspects of the thigh are dotted over closely with what appears to be a pustular eruption in the stage of crusting. Over a space which would be covered by the palm of the hand are the little bunches before spoken of. They are groups or clusters of white points, about the size of a millet-seed, containing opaque fluid. On closer examination, minuter ones may be traced scattered all over the thigh, suggesting to the mind varicose lymphatics filled with lymph; and on puncturing them, a milky fluid exudes, which coagulates, and under the microscope exhibits all the characters of true lymph. Little raised, tortuous lines can also be detected, superficial, and produced by some distended vessel running in a serpentine direction, due to hypertrophied lymphatics. It is evident that the pustular eruption is due to inflammation of the distended lymphatics developed at the prominent points, for the pus is mixed with lymph.

The limb feels elastic and firm, and the irregularities are more apparent than real; still there is rather more hardness in some places than others. The surface is cool. The swelling is very freely movable over the femur, and if any one part be handled, the whole moves. This also is apparent when the muscles are made to contract. There is no tenderness or enlargement of the glands in the groin, and not a *vestige or trace of varicose veins* or œdema of the limb. The tortuous lymphatics occasionally burst naturally, and discharge freely. The boy states that he has collected pints of it. The limb has evidently decreased in size since the lymphatics came to the surface and have disgorged their contents from time to time.

The boy declined all treatment. Numerous suggestions were offered when he was exhibited at the Pathological Society, some advising the ligature of the external iliac artery, others

that it should be attacked in detail with caustics after Fell's method. My own opinion is, that the disease is irremediable; that it will doubtless increase until it represents one of those enormous growths alluded to at the commencement of this article, producing inability to move from its bulk and weight, and that the only remedy will then be (should any be sought) amputation of the limb at the joint.

Weymouth-street, April, 1866.

ON A CASE OF PECULIAR LESION OF THE BRAIN, ACCOMPANIED BY MORE OR LESS COMPLETE LOSS OF THE POWER OF SPEECH.

By H. DODGSON, M.D. EDIN.

As I have not seen much allusion made in THE LANCET to the above affection, which has of late attracted much attention in France, I send the following well-marked case for publication:—

Mary S——, aged sixty-four years, was suddenly seized on Sept. 28th, 1864, with what appeared to be a severe attack of apoplexy. When first seen she was perfectly comatose, with more or less stertorous breathing. In this state she remained three days, taking no food, and passing her evacuations involuntarily. When she came a little to herself it was found that the *right* half of the body was completely paralysed, and that she could not speak, or at least could only articulate one word—"far." This word (or syllable) she afterwards—up to the time of her death—made use of on all occasions and in answer to all kinds of questions. She apparently understood well what was said to her, but on attempting to reply could only articulate the word "far," which she usually repeated three or four times in rapid succession. I have made inquiries of her attendants, and cannot find, at all events during the last eight months of her life, that she ever articulated any other word. Her sister, indeed, with whom she lived for the first few months of her illness, stated to me that she had occasionally said "yes" and "no;" but I do not place much reliance on this statement, for I have myself intentionally asked her questions requiring a simple affirmative or negative answer, but in place of that she invariably replied, "far, far, far."

She remained much in the same condition for many months, except that during the latter portion of her illness the right arm became flexed and rigid, and she recovered some little power over the leg, but not so much as to enable her to walk, or even stand. The immediate cause of death, which occurred on the 25th of November, 1865, was chronic bronchitis.

The following were the appearances observed in the brain at the autopsy, fifty-six hours after death:—The arachnoid covering the upper surface of the hemispheres was somewhat opaque in several places, with a little serum between it and the convolutions. There was no fluid at the base of the brain, or in the ventricles. On slicing the *left* hemisphere horizontally, from above downwards, the white substance at one place was found stained of a dirty yellowish-brown colour. This was a little above the level of the corpus callosum, and external to the lateral ventricle. On removing another thin slice of cerebral substance, a cavity was disclosed, about an inch and a quarter in length. With the exception of about a drachm of dirty-brown serum, the cavity was empty, with its sides nearly approximated. When opened up it was about the size and shape of a walnut, its long axis corresponding with that of the brain. The cavity was lined throughout with a tough and strong membrane, or cyst, of a reddish-brown colour. On microscopic examination it was seen to be composed of white fibrous tissue, bloodvessels, compound granule-cells, blood-crystals, mineral and granular matter. The brain-substance for a very few lines all around the cavity was of a dirty yellowish or reddish-brown colour. *There was no softening appreciable to the touch*, but the stained part, and that alone, contained numerous compound granule-cells when examined under the microscope. The cavity did not at all involve the left lateral ventricle; it was external to it. To define its position more accurately: it was placed partly in the anterior and partly in the middle lobe of the brain, between the island of Reil on the one side, and the body and anterior horn of the lateral ventricle on the other. Its inner margin corresponded to, and was opposite the left corpus striatum. The original lesion being, in fact, in the outer or extra-ventricular margin of that body, or between it and the convolutions of the island of Reil and of the Sylvian fissure. Superiorly it was about on a level with the corpus callosum, and was unconnected with the descending cornu of the lateral ventricle below or beneath it. No lesion was found in any other part of this or the opposite hemisphere of the brain, which was carefully examined throughout.

Remarks.—The faculty of speech was first placed by Gall in the anterior lobes of the brain. M. Bouillaud in 1825 stated, and has since constantly maintained, that the anterior lobes of the brain are the seat of the faculty of co-ordinating speech. M. Marc Dax, in 1836, placed it in the *left* hemisphere, and published numerous cases in support of his theory. M. Broca localises the faculty still further, and places it in the third convolution of the left anterior lobe of the cerebrum. (This third convolution of the French corresponds, I believe, to what we call the convolution of the fissure of Sylvius, or rather to that portion of the convolution which borders the anterior lip of the fissure.)

This loss of power of articulate speech is called by the French *aphasie*, or *aphemie*. A discussion as to its nature took place in the Académie de Médecine of Paris during the early part of last year, extending from April to June, in the course of which many of the most eminent physicians of the French capital related their experience and expressed their views upon it. M. Bouillaud was so confident of the correctness of his theory that he offered a prize of 500 francs to anyone who could produce an instance of entire destruction of both anterior lobes of the brain, or even of one of them, without aphasia. As to the nature of the lesion, M. Trousseau, who has paid much attention to the subject, and whose clinical lectures on it have been published in a separate form, stated before the Academy that it is nearly always softening when the loss of speech is permanent. He added that he only knew of one case (published by M. Broca) in which there was a cyst in the brain, the sides of which being covered with hæmatin led to the conclusion that it had been the seat of an ancient hæmorrhagic clot; and he summed-up his opinion in the following words:—"Lorsqu'on observe une apoplexie avec aphasie, on est autorisé à conclure à un ramollissement du cerveau, et à rattacher ce ramollissement à une oblitération artérielle, s'il existe une affection du cœur ou des vaisseaux."* This opinion is important as showing that the case cited above is an exceptional one as regards the nature of the lesion, which there can be no doubt was hæmorrhagic, with little if any true softening. Indeed, I was surprised that there was not a considerable amount of it, the flexed and rigid state of the right arm causing me to diagnose softening during life. I may add that the discussion at the French Academy of Medicine came to a close without any definite conclusion being arrived at; for whilst it was admitted that in the great majority of cases a lesion of the left anterior lobe of the brain coexisted, yet there were other cases, either of aphasie without such a lesion, or of lesion of this portion of the brain without aphasie, that would seem to negative any theory hitherto formed. The case cited above would certainly seem to confirm M. Broca's views.

Cockermouth, April, 1866.

* Gaz. Hebdom. de Méd. et de Chir., April 28th, 1865, p. 268.

CARIES AND FISTULOUS TRACTS.—Every surgeon knows how troublesome is the treatment of this affection of bone. Slitting open the tracts and gouging the bone is not always feasible or effectual, and injections must often be resorted to. Solutions of nitrate of silver of various strengths and tincture of iodine are often used, and with good results; but we are bound to notice a series of cases published in *L'Union Médicale* by M. Notta, an hospital surgeon of Lisieux, in France. The lotion used for injecting the tracts is called the liquor Villati, and belongs to the Veterinary Pharmacopœia. Its composition is as follows:—Solution of subacetate of lead, one ounce; crystallized sulphate of copper, crystallized sulphate of zinc, of each half an ounce; white vinegar, about seven ounces. The cases quoted are certainly striking, and about a dozen injections a month (which are, however, somewhat painful) sufficed, on an average, to bring on the healing of the fistulous openings. Professor Nélaton has fully sanctioned the practice, and among the cases cited there are several which were under his care.

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

THE APPLICATION OF CHLORIDE OF ZINC IN SOLUTION TO SURGICAL AND ACCIDENTAL WOUNDS; REMARKS UPON SOME CASES.

(Under the care of Mr. DE MORGAN.)

FOR several months past, visitors to the operating theatre of this hospital must have noticed a process adopted at the close of every cutting operation, which is at once novel and impossible to be understood without explanation. Just before the introduction of the sutures, the surgeon has freely applied with a sponge a solution of chloride of zinc (forty grains to one ounce of water) to every part of the wound. No matter what the structure exposed—muscle, areolar tissue, bone, blood-vessels, peritoneum, &c.,—this proceeding has been and is adopted. Its first effect is to cause an excitement of small vessels, and a general oozing of blood from surfaces which had been previously dry. The blood itself is changed in appearance, becoming creamy and of a peculiar pink colour. On further application the whole surface is softened, and takes on the same hue.

Referring the reader for ample details to a paper by Mr. De Morgan, in the *British and Foreign Medico-Chirurgical Review* for Jan. 1866, we will briefly explain the objects of this proceeding, and note some interesting particulars connected with it. It seems, then, that about a year ago, Mr. De Morgan, struck by the results of a case in which Mr. Moore had applied the solid chloride of zinc to a wound arising from removal of a cancerous tumour, conceived the idea of applying the same substance *in solution* in a case of similar character. His aim was to destroy any floating particles of the disease which might have escaped removal by the knife, and he thought that the solution would penetrate to parts which the solid stick could not reach. He acted upon the idea, and a solution of twenty grains to the ounce was thoroughly pressed into the wound with the sponge. As a result of such a proceeding, he thought it likely that considerable pain might be felt, that the wound would become swollen and angry, and that a superficial slough would form and be cast off by suppuration. In effect none of these results followed. The pain experienced was far less than is usually felt. On removing the dressings eighteen hours afterwards, he found diminished instead of increased action, and the skin up to the very margin of the gap looking and feeling like the skin of the sound breast. No suppuration followed; there was an entire absence of any animal odour to the end of the case; the whole line of incision, except where the ligatures came out at one angle, united in the course of twenty-four hours, and healed entirely as soon as the ligatures came away. Thus encouraged, he used in other cases a solution containing thirty and then forty grains to the ounce. In some there was rapid healing by the first intention; in others, some after-suppuration; but none evinced any inflammatory action. These were cases of cancer. The fact of the entire absence of smell which marked the progress of these cases, and the generally healthy aspect of the wound, suggested to Mr. De Morgan that the process might be beneficially used in surgical operations generally. He accordingly acted upon this idea, and his example has been followed by his colleagues, with results which we shall now proceed to notice. And here we may remark, incidentally, that the same process is applied, not only in surgical operations, but in every case of accident involving severe lacerations. So that all patients in the Middlesex Hospital suffering from wounds accidentally or intentionally inflicted have those wounds thoroughly sponged at once with a solution of chloride of zinc (forty grains to the ounce). As a rule, this is not repeated; but if in the progress of the case an odour should arise from sloughing of tissue, an application of a weaker solution (five, ten, or twenty grains to the ounce) is used.

We learn that whereas, previous to the adoption of this practice, erysipelas and pyæmia following operations were common occurrences, such accidents are now scarcely ever met with. The process has now been employed about nine months. During that time erysipelas has attacked no case in which the chloride of zinc had been used, although numerous patients affected with the disease have been admitted into wards containing surgical patients. On the other hand, it happened quite recently that something like a crucial test was applied. An old woman had a tumour of the breast removed, and the application of the chloride was accidentally omitted. A few days after the operation she was attacked with erysipelas, which subsided and then recurred, involving her face and head. Again we are informed that during the same period only two patients to whose wounds the chloride of zinc had been applied have died from pyæmia: a young man in a very exhausted state, whose knee had been excised a month previously; and a woman, who had part of the sternum gouged out to remove some secondary cancer growth. She died six weeks after the operation. Long before this all direct effect of the chloride must have passed off; and Mr. De Morgan, with his present experience, thinks that had the wound been washed with the solution from time to time the result would have been different.

In the course of numerous visits to this hospital, we have carefully observed the condition of wounds which have been treated by Mr. De Morgan's method, and these are the points which are most noticeable. On turning down the bedclothes and removing the dressings, we have always remarked the absence of that peculiar sickly smell which is commonly observed in the neighbourhood of open wounds, especially where bone is exposed. The wound itself is peculiarly healthy-looking; the granulations firm and of good colour; suppuration moderate; the skin up to the margin of the wound of perfectly natural colour and temperature. There has been indeed in every case which we have examined an entire absence of inflammatory action. Lastly, and this is a very striking and important point, many patients have told us that they felt no pain in the wound after operation; others have experienced pain for an hour or so; in none have we found it insisted upon as a serious inconvenience.

Until these results are witnessed, it is very difficult for anyone reading or hearing of this process to divest his mind of the idea of destruction and irritation as necessarily associated with the use of a substance which is well known as one of our most powerful caustics. We are often, however, apt unconsciously to endow a "caustic" with a sort of vitality—to look upon it as a substance possessing an inherent power of destruction under any circumstances. But it should be remembered that the caustic property of chloride of zinc probably depends upon the extreme attraction of this substance for water. Dissolved in that fluid, this quality, of course, ceases *ipso facto*; but the power of entering into certain chemical combinations in the tissues and blood remains. As an illustration of the harmless character of the liquid, it is sufficient to mention a case which we have lately had under observation:—

A woman, aged thirty-seven, had lost her nasal bones from syphilitic ulceration, a gap remaining in the skin at that position, which Mr. De Morgan proceeded, on the 14th of March, to bridge over by a plastic operation. He pared its edges, passed the knife freely under the adjoining skin, and allowed it to emerge a few lines from the opening, so as to detach a portion of integument, and permit it to be drawn over the cavity. The whole wound was then sponged as usual with the strong chloride-of-zinc solution, and the edges brought into contact by pins and sutures in the usual manner. A week afterwards we found the patient with the deformity remedied, the wound having healed by the first intention. She has since been discharged.

The use of the chloride of zinc may be considered under three heads:—1. Its influence in checking the return of cancerous disease. 2. Its effects in promoting healthy action and preventing decomposition in wounds. 3. Its influence in preventing erysipelas and pyæmia.

Our space has not permitted us to do more than refer briefly, upon this occasion, to these points. As regards the first especially, time is still required before any very conclusive opinion can be formed upon the subject. But, in reference to the second, we feel no hesitation in stating our conviction that the beneficial influence of this substance has been clearly proved.

Now, without committing ourselves to any expression of opinion as to the essential nature of pyæmia,* we may remark that its occurrence is nearly always ushered in by an unhealthy condition of wound. If, therefore, we can obviate this mischance—if we can ensure healthy action and prevent decomposition, there are few who will not believe that we are on the right track to prevent the occurrence of pyæmia. We dare scarcely hint at the terrible loss of life which has resulted from this condition in some of our hospitals during the last twelvemonth. Contrasting with this the remarkable immunity enjoyed by the Middlesex Hospital, it is difficult to believe that it is to be explained as a mere coincidence. At least such a coincidence is a most desirable one, and it will be agreed, we think, that a plan of treatment which has been followed by such results as we have described ought, without loss of time, to be put to a thorough test wherever patients with open wounds are congregated.

WESTMINSTER HOSPITAL.

DIAGNOSIS OF CHRONIC ALCOHOLISM.

IN the out-patient room at this hospital we heard Dr. Anstie, not long since, make some remarks to the students on the diagnosis between the symptoms of chronic alcoholic intoxication and of other conditions which produce very similar phenomena. The class of cases which are most likely to occasion difficulty consists, according to Dr. Anstie, of a particular variety of dyspeptics, who, excepting their dyspepsia, complain of little save a tendency to "spasms," meaning by that phrase, colicky pains in the abdomen, with flatulence. Then there is another group of cases in which there is the possibility that the poisonous action of lead has been at work. The symptoms here will chiefly consist of partial sensory or motor paralysis, or both, of the extremities. A third class of doubtful cases is distinguished by the occurrence, at intervals, of epileptiform convulsions, with very considerable impairment of the memory, and, perhaps, of other mental faculties in the interval. A fourth group consists of cases in which a violent tremor of the extremities, closely resembling paralysis agitans, is present. A fifth group consists of women who exhibit the Protean symptoms of "hysteria," and complain in rapid succession of spasms, numbness and loss of power in limbs, mental distress, choking sensation in the throat, and all the catalogue of hysteric woes. A sixth, and much smaller group, *consisting of men entirely*, exhibit symptoms which suggest *general* paralysis of the insane. A seventh group of patients present symptoms simulating locomotor ataxy.

To go into the minute points of diagnosis between the numerous diseased conditions simulated by chronic alcoholism would require a treatise of considerable length; but there are certain central features which are of the greatest use in practice. These are: morning sickness, muscular tremor (though perhaps very slight), marked insomnia (the patient turning restlessly from side to side in the bed), bleared and watery eyes, and a slightly jaundiced tint of conjunctiva. Not one of these symptoms, taken alone, is at all characteristic of alcoholism; but the combination of them is very strong evidence of that affection. If the patient should complain, besides this, of muscæ volitantes, or of flashes of light before the eyes, the probability is greatly heightened; but it reaches the point of certainty, in Dr. Anstie's opinion, when, in addition to the train of symptoms already recited, the individual (otherwise sound of mind) suffers from visual hallucinations in the form of distinct shapes of men, animals, trees, or, still more, of loathsome insects, serpents, or the like. Perhaps the most marked resemblance is that which exists between the external features of general paralysis and those of chronic alcoholism. But the mental condition of the patient would here be decisive, even if the above-named diagnostic marks were insufficient. The commencing general paralytic is elated and vain-glorious in his ideas; the sufferer from alcohol, however noisy or restless, is *au fond* invariably wretched and depressed. There are, it is true, certain *very* rare cases of general paralysis in which the mind is depressed throughout; but these exceptional patients would not present the other characteristics of alcoholic poisoning, and the fact may therefore be disregarded.

* For the various views entertained upon this point see Dr. Bristowe's able article Pyæmia, Reynolds's "System of Medicine," vol. i.

ROYAL LONDON OPHTHALMIC HOSPITAL.

SEVERE BURN OF THE EYE AND PALPEBRAL SURFACES OF BOTH EYELIDS FROM THE EXPLOSION OF A SQUIB CLOSE TO THE EYE, FOLLOWED BY INFLAMMATION AND SUPPURATION OF THE GLOBE AND CONJUNCTIVA OF THE LIDS.

(Under the care of Mr. LAWSON.)

IN the two following cases we have good examples of the effects of the explosion of gunpowder near the eye. They both occurred on the evening of the last 5th of November, and may be regarded as fair specimens of a large group of accidents which are yearly occasioned in the celebration of that night by the use of fireworks and firearms in a crowded city.

In the first case the eye was completely destroyed by the scorching effect of the explosion of powder in close proximity to it. A mechanic was returning home, and whilst walking quietly down a street, heedless of the squibs which were being let off in different directions, one was pointed close to his face by some strange hand, and immediately exploded, inflicting such irreparable injury that the eye was destroyed and had afterwards to be removed.

In the second patient the eye suffered partly from the concussion and partly from the abrasion of the corneal epithelium; but the chief injury was the lodgment of a number of unexploded grains of powder in the cornea and the adjacent conjunctiva. In such cases it is of importance to remove all the specks of powder from the surface of the cornea as soon as possible after the injury, as unless this is done at an early period the difficulty of getting them away is greatly increased, and after a while it becomes impossible. If they are allowed to remain they cause a serious impairment of vision, not only from the little black speck which is formed by each, but also from the little halo of nebulosity with which each grain so commonly becomes surrounded.

Henry B——, aged forty-seven, came to the hospital on the 6th of November, 1865, having the previous evening met with the following injury to the left eye:—He was walking down a street where some men were letting off squibs, when one of them held a squib within four inches of his eye, and in that position it exploded. On admission, both eyelids were very œdematous and swollen. On separating them with a speculum, a quantity of loose, unexploded powder, moistened into a thick paste with the tears, was seen lying between them and the globe. The cornea and conjunctival surfaces of the eye, and upper and lower lids, were dried and charred, and looked whitened, just as if they had been boiled. A quantity of unexploded powder was partially adherent to the burnt tissues, and some was embedded in them, giving them a mottled appearance. Mr. Lawson removed as much of the loose pasty powder as was possible from between the lids with a small scoop, and a stream of tepid water was gently syringed over the front of the eye to wash away all the detached particles which remained. A few drops of olive oil were dropped into the eye, some water-dressing was laid over the lids, and one grain of opium was ordered to be taken every six hours.

Nov. 10th.—The eye very painful. The lids are œdematous; the whole cornea semi-opaque. There is hypopion, and a free muco-purulent discharge from the conjunctiva of the lids and globe. To continue the treatment.

14th.—The cornea is opaque, and evidently about to slough. There is a free suppuration of the conjunctiva of the eye and lids.

17th.—The whole cornea has sloughed and separated, the lens has come away, and the surface of the vitreous and iris is covered with lymph and pus. The conjunctiva of the lids and globe is suppurating.

21st.—The conjunctiva of both eyelids and of the eye is quite destroyed, and there remain large granulating opposed surfaces. Adhesions have already commenced between the whole front of the eye and the palpebral surfaces of the lids. The man still complains of pain. Under these circumstances Mr. Lawson strongly advised the removal of the eye, and, with the patient's consent, excised it. Had granulation and cicatrization been allowed to go on, a complete symblepharon, or union of the whole interior surface of the eye to the globe, would have taken place, a result which would have been a constant source of discomfort to the patient.

INJURY TO THE EYE FROM GUNPOWDER; LODGMENT OF SOME UNEXPLODED GRAINS IN THE CORNEA AND CONJUNCTIVA COVERING THE SCLEROTIC.

Robert A——, aged nineteen, applied at the hospital on November 6th, 1865, on account of an injury he had the evening before received to the right eye. He was engaged with some friends letting off fireworks, when, to increase the effect, several men fired off their Enfield rifles, loaded only with powder and a piece of paper for wadding. The night was very dark, so that they could not distinguish each other at more than a few feet distance, and a rifle was inadvertently fired in a direct line with and scarcely three yards from his face. The pellet came in contact with the malar bone, causing some bruising and abrasion of the skin; but a quantity of the unexploded powder struck the eye, and lodged itself in the cornea and conjunctiva covering the sclerotic. In addition to the powder embedded in the cornea, its epithelial surface was abraded. The eye was very painful and intolerant of light, and the lids were puffy and œdematous.

Treatment.—Drawing upwards the upper eyelid, and the lower one being held downwards with the finger of an assistant, Mr. Lawson with a fine needle picked away from the cornea all the grains of unexploded powder which it was possible for him to remove with safety to the eye, and also all that could be easily taken away from the conjunctiva. Two or three grains of powder more deeply embedded in the cornea than the rest were allowed to remain. A little olive oil was then dropped into the eye, and water-dressing was laid over the lids. Two leeches were ordered to be applied to the temple.

Nov. 10th.—The man states that the eye felt much easier after the leeches. The eye, although very irritable, is doing well; the cornea is very hazy. He was ordered to use a belladonna lotion.

15th.—Decidedly better. There is still some photophobia. The cornea, though cloudy, is clearing. To continue the lotion.

From this date the eye steadily improved, and at the beginning of December the patient ceased his attendance at the hospital. The sight of the eye was quite restored.

Provincial Hospital Reports.

ROYAL ALBERT HOSPITAL, DEVONPORT.

THE USE OF LOCAL ANÆSTHESIA.

(Reported by PAUL SWAIN, Esq., Surgeon to the Hospital.)

SOME experiments were lately made at this hospital in producing local anæsthesia by Dr. Richardson's plan. The instrument used was supplied by Messrs. Krohne and Sesemann; and the ether (obtained also from that firm) was of the required specific gravity—viz., 0·723.

The first case in which it was tried was one of epithelial cancer of the lip. The skin became blanched after the spray had been directed on it for nearly two minutes. Mr. Bulteel then removed the diseased portion by an elliptical incision. The skin was evidently insensible to pain; but the deeper tissues and the mucous membrane were unaffected, and the diminution of suffering was consequently very little. If a second instrument had been applied to the mucous membrane, no doubt more complete anæsthesia would have been obtained.

The second case was the removal of a diseased nail from the middle finger of a man. Blanching was produced in about the same time as before. The nail was then slit up with a pair of scissors, and the two halves torn off with forceps. The patient suffered some pain, but, as this was the second time the nail had been removed (the first operation having been performed without chloroform), he was able to state that his sufferings were much less on this occasion. It is very probable that more perfect anæsthesia would have been produced had the spray been directed for a longer time on the parts.

The third case was that of a woman with a fatty tumour, situated on the left side of the spine at the angle of the scapula. The incision required for its removal was three inches and a half long. A blanched line of this length was produced in about a minute and a half. I felt the skin cut quite crisply under the knife. No pain whatever was felt by the patient during this incision; and although the tumour required considerable dissection from the surrounding tissues, she felt only a sensation, which she afterwards described as of "pins and needles." The spray was not directed to the deeper parts. I applied a warm sponge to encourage hæmorrhage and to restore the temperature of the parts. One ligature was required, the remaining vessels being closed by simple torsion. The wound was brought together by strapping. It healed almost entirely by the first intention; but, as is often the case, suppuration set in, and the lips were burst asunder. It is now healing kindly.

In cases where long incisions are required, it has struck me that the small jet might be modified so as to resemble in shape the instrument used for singeing horses, by which a long line of spray would be produced. If this could be managed, it would be far preferable to the use of two or more single jets, which involves considerable crowding round the patient, and must materially interfere with the operator.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 27TH.

DR. ALDERSON, F.R.S., PRESIDENT.

A CASE OF LUMBAR COLOTOMY (AMUSSAT'S OPERATION), SUCCESSFULLY PERFORMED FOR THE RELIEF OF A VESICO-INTESTINAL FISTULA.

BY T. HOLMES, M.A. CANTAB.,

SURGEON TO THE HOSPITAL FOR SICK CHILDREN, AND ASSISTANT-SURGEON TO ST. GEORGE'S HOSPITAL.

ULCERATED openings sometimes take place between the bladder and either the small or large intestine, which have no connexion with previous stricture of the gut, still less with cancer. In those cases in which the fæces come from the lower bowel, and are consequently more solid, great suffering is produced, and the formation of calculus in the bladder becomes exceedingly probable. In such of these cases as are not dependent upon malignant disease, colotomy, by diverting the fæces from the fistulous channel, may possibly enable the latter to close, and is at any rate necessary in order to relieve the sufferings caused by the fæces passing into the bladder. The author read the notes of a case in which communication existed between the bladder and some part of the bowel above the rectum, and in which Amussat's operation was performed eight months since; the patient being now in good health, and in a condition of tolerable comfort, with evidence of considerable contraction, if not complete closure, of the fistula. References were also made to some other cases of communication between the bowel and bladder, with a view to support the opinions here put forward and the treatment adopted in the above case; and also with a view to the diagnosis of the seat of the communication with the bowel when out of reach of the ordinary means of examination.

Mr. SOLLY thought the Society was indebted to Mr. Holmes for his case. The profession was not fully alive to the value of Amussat's operation in cancerous diseases of the rectum, and the case related would improve our knowledge of the operation in other than malignant diseases. One peculiarity of interest in it was, that the operation was performed when the colon was not distended, which rendered the proceeding a difficult one. In his (Mr. Solly's) cases the intestine was full, and the operation very simple and easy. He would inquire whether the cavity of the abdomen was opened before the colon was reached?

Mr. HOLMES COOTE said that very few surgeons had had personal experience of Amussat's operation. He had not operated upon the living, but had on the dead subject. The proceeding when the colon was distended was simple and easy; not so when, as in Mr. Holmes's case, the intestine was in a state of collapse. The case was interesting from the complete relief afforded to the patient, and from the fact that the disease was of a non-malignant character. Did the ulceration arise from tuberculous deposit, which might be only of temporary existence, and a complete cure follow?

Mr. CURLING said that the remark made by Mr. Holmes Coote, a surgeon to a large hospital, that he had not yet had occasion to perform colotomy, seemed to confirm the observation of Mr. Solly, that the operation was not sufficiently appreciated by the profession as a means of giving relief in many

cases of painful disease. In the interesting case which had just been read, no doubt could exist as to the propriety of opening the lumbar colon, and as to the great advantage which might result from such a proceeding. We had only to contrast the great misery, ending in death, which existed in the case communicated by Mr. Morgan to the last volume of the Society's "Transactions"—in which the ileum opened into the bladder, surgery being powerless in affording relief, with the comparative comfort and release from all suffering now enjoyed by Mr. Holmes's patient,—to conclude that, in this instance, the operation was a triumph of surgery. In his (Mr. Curling's) opinion, the principal interest of the case consisted in the diagnosis which had been so carefully and successfully made—in determining, chiefly from the solid character of the fæces which passed from the bladder, and from the free escape of urine by the rectum, that the opening from the bowel was in the larger bowel low down. He would endeavour to follow the author of the paper in confining his observations relating to colotomy to cases of non-malignant disease without obstruction. He believed that there were many cases of the kind to which this operation was applicable—cases of inveterate stricture of the rectum, with ulcerations and mucous growths, attended with an exhausting discharge, the patients going from hospital to hospital for relief, leading a miserable life, and ultimately dying of the disease. Mr. Pennell, whose interesting case of colotomy had been alluded to by Mr. Holmes, in his paper communicated to the Society sixteen years ago, remarked that he would have recourse to this operation in every case of incurable stricture of the rectum, which produced severe suffering, and was beginning to destroy the health and undermine the constitution. He (Mr. Curling) was not aware that this suggestion had ever been acted on, until six weeks ago, when he was induced to perform the operation in the London Hospital on a man only twenty-seven years of age, who had an obstinate stricture and a diseased state of rectum such as he had described. The man was not pressed to submit to the operation, but when the circumstances of the after-condition were fully explained to him he begged to have it done. He recovered favourably, and under tannic acid and chloride of zinc injections the discharge from the rectum was greatly reduced; but it was too early to speak of the effect of diverting the channel for the fæces, and of other treatment, in bringing the rectum into a more healthy state. Colotomy was supposed to be a dangerous as well as a difficult operation. When performed in consequence of obstruction arising perhaps from cancerous disease, and delayed to the latest period, being resorted to only as a *dernier ressort* after a stoppage of three or four weeks, the operation was necessarily fatal in many instances. Owing perhaps to accidental circumstances, it had fallen to his lot to perform an unusual number of these operations. His experience extended to fourteen cases; eleven he had performed himself, and he had assisted in three other cases. Now in nine the operation was undertaken to relieve obstruction, in all from carcinomatous disease; five were fatal, and four recovered; but in none of the fatal cases could death be said to result from the direct effects of the operation. In the remaining five cases, in which there was no obstruction, the operation was performed to relieve the distressing symptoms of disease in the rectum. All of them recovered favourably. So that with this experience we are justified in saying that colotomy is not attended with any great danger. He had not met with any serious difficulty in opening the colon in the cases where no obstruction existed. He attached great importance to securing the bowel to the margins of the wound in the skin, so as to bring the gut near the surface, and to prevent feculent matter escaping into the sigmoid flexure below, satisfactory result of the author's case, and the discussion as this was liable to be a source of trouble. He trusted that the which had taken place that evening, would tend to remove much of the prejudice which existed against colotomy, being assured that it was capable of diminishing suffering and prolonging life in many cases of serious disease.

Mr. HOLTHOUSE could confirm the observations of Mr. Curling as to the great depth of the bowel from the surface in many of these cases, as well as to the necessity of securing the edges of the intestinal opening close to the cutaneous one. He (Mr. Holthouse) had had some experience in the performance of Amussat's operation, and nothing was more striking than the difference of depth at which the colon was situated in different cases. When this intestine was distended above the seat of the operation, it pressed towards the surface, producing such a stretching and apparent thinning of the superimposed structures that a trocar might be thrust at once into the bowel without any fear of wounding the peritoneum. In other cases, on the contrary, the colon was empty and contracted, sometimes not larger than the finger, and lay at a great distance from the surface. This was the condition of the patient in the last case operated upon by him, and which indeed somewhat resembled that of Mr. Holmes, inasmuch as a communication had formed between the intestine and the bladder. With the view of acquiring a correct knowledge of the relative anatomy of the parts concerned in this operation, and the appearances which indicate the proximity of the colon, Mr. Holthouse, some years ago, made a number of dissections of the region implicated. The parts were dissected both from before and from behind, and the following was the mode of proceeding:—The abdomen being opened and the small intestines removed, a long carpet-pin was thrust directly backwards through the descending colon, one inch above the crest of the ilium, till it emerged through the skin in the loin. Taking the average of the cases examined, the lower end of the kidney was found to be two-thirds of an inch above the transfixed part of the colon, and internal to it. The intestine itself lay on a layer of fat and the anterior lamella of the lumbar fascia, which separated it from the quadratus muscle. In performing Amussat's operation therefore, after cutting through the skin and subcutaneous tissue, together with the superficial muscles, one arrived at a very strong dense fascia (fascia lumborum) connected with the internal oblique and transversalis muscles externally, passing beneath the outer margin of the erector spinæ and in front of the quadratus. On dividing this and the last-named muscle, a layer of fat or omentum-like structure, which varies in thickness, comes into view, and immediately behind this is the uncovered portion of the colon. Mr. Holthouse regretted, with previous speakers, that colotomy was not more frequently resorted to, and, when performed, that it was not done earlier. He had on several occasions recommended its performance, but it was either declined or put off till too late. The case of Mr. Gracie (Mr. Pennell's patent), which had been referred to by Mr. Holmes and Mr. Curling, was a striking example of what the operation could effect. Mr. Holthouse had had the advantage of seeing that gentleman when he was in London some years ago, and as evidence of the completeness of his recovery it might be mentioned that he was in the habit of walking from his lodgings in Piccadilly to the Docks and back again without experiencing any inconvenience. His chief anxiety was lest the artificial anus should close up.

Mr. CURLING rose again to state that he had under his care in the London Hospital, at the present time, two patients upon whom he had performed colotomy: one, to whose case he had already adverted; and another, a young man aged twenty, with cancerous disease of the rectum without obstruction. And he should be happy to show the cases to any Fellows interested in the subject. He would also add, that he had once operated in a case of extreme lateral curvature of the spine, and had succeeded in reaching the bowel above the anterior-superior spinous process of the ilium without opening the peritoneum.

Dr. MARCET related a case of obstruction of the intestine, which was removed by injections of large quantities of olive oil.

Mr. HOLMES then replied. He said that the peritoneal cavity was not opened in the operation. The difficulty in reaching the colon depended upon its being in an abnormal position—quite different, indeed, from its ordinary situation; but he succeeded in reaching it in the mode described in the paper. Usually, as the colon was distended, there was no difficulty in finding it, and this without opening the peritoneum; though this cavity had in many instances been laid open in this operation, and often without the knowledge of the surgeon. He thought with Mr. Coote that the case was one of ulceration of tubercular deposit, a form of disease by no means rare. He agreed that many cases in which Amussat's operation might be performed, with the result of prolonging life and affording much comfort, went now from hospital to hospital, and were submitted to instrumental and other interference. Occasionally in these cases, after operation, the comfort of the patient was dreadfully interfered with from the difficulty of fitting an instrument to the opening, and from the constant escape of fæcal matter and its offensive odour. When the bowels acted at regular periods, and the pad could be well adjusted, the patient experienced much comfort.

THE vacant Lectureship on Natural Philosophy in the medical school of Charing-cross Hospital has been filled up by the appointment of Dr. Edward Divers, for some years Professor of Materia Medica in Queen's College, Birmingham.

Reviews and Notices of Books.

A Treatise on the Principles and Practice of Ophthalmic Medicine and Surgery. By T. WHARTON JONES, F.R.S., Professor of Ophthalmic Medicine &c. in University College Hospital. Third Edition. London: John Churchill and Sons. 1865.

Traité Théorique et Pratique des Maladies des Yeux. Par L. WECKER. Tome II., Fascic. 1. Paris: Adrien Delahaye. 1866.

Lectures on Diseases of the Eye: referring principally to those affections requiring the aid of the Ophthalmoscope for their diagnosis. By N. C. MACNAMARA, Surgeon to the Calcutta Ophthalmic Hospital. Calcutta: R. C. Lepage.

Du Diagnostic des Maladies du Système Nerveux par l'Ophthalmoscope. Par E. BOUCHUT, M.D. &c. Paris: G. Baillière. 1866.

The Optical Defects of the Eye. By J. ZACHARIAH LAURENCE, Surgeon to the Ophthalmic Hospital, Southwark. London: John Churchill and Sons. 1866.

THE stream of ophthalmic publications, by home and foreign authors, continues to flow with a broader and stronger current. Nor is this either surprising or to be regretted. The diseases of the eye require to be completely restudied; and the introduction of new methods of observation of pathological changes in the tissues on the one hand, and the possession of fresh data for the investigation of optical defects and anomalies of the visual apparatus on the other, give room for much real and valuable work in every part of the subject. Then, too, a great impulse has been given of late to the perfection of older modes of operation; and thus every ophthalmologist finds, without difficulty, materials for fresh inquiry and excuses for fresh dissertation. A good deal that is written is a repetition by one author of what has been recorded by others, with additions, perhaps, from his own stores; but even in describing other men's labours, a really honest and competent observer may, and often does, find opportunity for the expression of views which have their own practical value. So that we are more disposed to be sympathetic than critical in reviewing the works of ophthalmic surgeons who are stirred by the general movement around them, and excited by their own observation of things hidden from their predecessors, and as yet known only to few, to tell their story in their own words.

We wish we could say that Mr. Wharton Jones had executed the task of recasting his well-known handbook with the completeness and skill which might have been expected. We wish we could speak of this manual as fulfilling the want which exists for a complete and handy guide to students. But unfortunately it does not possess any of the merits which we should look for in such a handbook. It is a mixture of things old and new: the old not purged of what is effete and useless; the new not told with completeness or accuracy. Had Mr. Wharton Jones himself undertaken, for example, the description of the ophthalmoscope, and the optical principles upon which it rests, he would, we cannot doubt, have given an account more or less full, and in all respects accurate. But he has chosen to adopt, in great measure, that which M. Foucher added to the French translation of his manual; and in thus adopting a description given at second-hand by a surgeon very imperfectly acquainted with the subject, Mr. Jones has greatly injured the usefulness of his book. The ophthalmoscopic sections are throughout quite unworthy of the reputation and position of the author, and cannot be recommended to any student or practitioner as deserving of perusal, or as likely to do anything else than mislead. Nor can we speak much more favourably of the other parts of the book, which profess to give modern doctrines and practice. The section on Cataract is extremely incomplete, and very dangerous as a guide to practice. Critchett's and Schüft's modification of extraction, and the whole method of linear extraction, which is one of great promise and importance, are treated with the utmost meagreness. The description of Glaucoma and its classifications exhibits a pathological confusion which must utterly bewilder the uninstructed reader: "simple glaucoma with cataract," as described here, has no necessary connexion with the truly glaucomatous condition; and the identification of glaucoma with "arthritic posterior internal ophthalmia," chronic or acute, has no pathological justification in more than a small proportion of cases. The faults of the work are numerous, and it is greatly to be regretted that so confusing a book should form one of a series of standard manuals. It is not without regret that we find ourselves compelled to speak with blame of the work of a surgeon who has earned in the past a reputation which we respect and a character which we honour. Mr. Wharton Jones earned his spurs as an original investigator when the younger men of his generation were in the cradle. No one will suppose that he lacked the power to master all the details of recent progress, and to set them in a clear light; at all events, we do not entertain such a supposition. But this makes it the more important that we should honestly record the fact, that he has not made the requisite exertions, and does not supply the necessary information or views which can be accepted as correct or useful.

In Wecker's *Études ophthalmologiques*, of which the first half of the second volume has been recently issued, we have a book of a very different order. We have been able to speak of it throughout with warm praise; and this fasciculus, which treats of ophthalmoscopy and the diseases of the crystalline, vitreous body, retina, and optic nerve, amply maintains the character of the preceding parts. It is, we believe, the best treatise in any European language on the whole subject of the diseases of the eye.

Mr. John Zachariah Laurence's treatise on the "Optical Defects of the Eye" calls also for words of praise. Its author has thoroughly mastered the subject on which he writes; and in the abstract which he here presents of the results of modern investigations of the normal and abnormal conditions of the eye as an optical apparatus, he shows not only a thorough acquaintance with the doctrines of the earlier as of the latest writers, but familiarity with that improved practice which results from the application of them.

Professor Macnamara sends us from India a volume which indicates a satisfactory acquaintance with ophthalmoscopic work. He has watched with interest and intelligence the progress of ophthalmic science, and has produced a compilation which is very creditable. Nor does he write of things with which he is not familiar; for he evidently applies constantly in practice the improvements in diagnosis and procedure which he describes in his lectures.

M. Bouchut's work on the Application of the Ophthalmoscope to the Diagnosis of Diseases of the Nervous System, we signalise here as worthy of study. We have found it clear, honest, dogmatic, and generally sound. We do not agree with many of his observations, but shall hope to point out what we conceive to be clinical errors in a further review. Meantime we desire to speak of it with favour, and to claim for it many readers.

On Hip-joint Disease: with reference especially to treatment by mechanical means for the relief of contraction and deformity of the affected limb. By WM. CURTIS HUGMAN, F.R.C.S., late Surgeon to the Hospital for Deformities. Second Edition. pp. 96. London: Churchill and Sons.

MR. HUGMAN has republished his well-known essay on Hip-joint Disease, with an appendix of cases further illustrating the advantages to be derived, according to the author, from the prone position being assumed by the patient during the course of the malady. Mr. Hugman's views, though they have been some years before the profession, do not appear to have met with great acceptance at the hands of hospital surgeons, who might perhaps with advantage adopt the prone method of treatment in some of the numerous cases of hip disease which

come under their care, and particularly in those complicated by bed-sores and sinuses, which so frequently occur in this affection.

OUR LIBRARY TABLE.

Manual of Physiology. By WM. B. CARPENTER, M.D. Fourth Edition. pp. 749. London: Churchill and Sons.—This is a fresh edition of one of our most useful manuals for students, and is to be recommended not only for the lucid manner in which descriptions are given, but for the number of woodcuts illustrating each chapter. The various subjects are easily found by reference to a well-arranged index.

The Essentials of Materia Medica and Therapeutics. By ALFRED BARING GARROD, M.D., F.R.S. Second Edition, much enlarged. Fourth Thousand. London: Walton and Maberly. 1865.—This admirable text-book of materia medica fulfils all the requirements of the students of that branch of medical knowledge, and is remarkable for the best qualities of a practical guide. It is clear, well-arranged, concise but full, and shows throughout the workmanship of a true man of science writing on a subject which he has penetrated to its depths. The large sale with which it has met is only the fair expression and adequate reward of the author's skill and research.

The Restoration of Health, or the Application of the Laws of Hygiene &c. By WM. STRANGE, M.D. London: Longmans. 1865.—This is not so poor a book as the title and the somewhat bombastic preface and ill-arranged table of contents would lead one to suppose. We cannot say that the perusal of the volume will tend greatly to professional edification; but, as the author says, "it is confessedly difficult to write at once for the profession and for the public." The public have had many worse books of the kind provided for them, and some better.

Mr. CHRISTOPHER HEATH'S *Manual of Minor Surgery and Bandaging* (Churchill) has reached a third edition. It is running a deserved career of popularity. It is almost indispensable to house-surgeons and dressers, and is of the highest utility to every practitioner. Those who are in charge of passengers, or stationed in lonely places where they must be dresser, surgeon, and nurse, will find in it a mine of just such useful hints about small things as they require in every-day practice, but which are omitted or buried in larger volumes of surgery. Copies should be placed in every house-surgeon's room, and it ought to be on the library table in the hospital.

Human Anatomy, Practical and Descriptive. By T. H. LEDWICH, F.R.C.S.I., and E. LEDWICH, F.R.C.S.I. Second Edition. pp. 780. Dublin: Fannin.—The second edition of this useful work is free from the very many verbal errors which characterized the first issue. It may almost be said that it is an entirely new work.

Doctor Kemp: the Story of a Life with a Blemish. Two vols. London: Jackson, Walford, and Hodder.—This is an attempt at a psychological sketch of a doctor who, as though the profession had not already enough of ills to bear, is represented as the victim of a double deformity—a club-foot and a misanthropical turn of mind. This coincidence, says the editor, may be regarded in two aspects: either as an instance of the effect of physical development on the moral and intellectual being, or as a case of spiritual qualities manifesting themselves externally. We have read the book faithfully—moral reflections included,—and find ourselves not only unable to solve this knotty point, but utterly indifferent as to the solution which others may venture of a character which is as disagreeable as it is uninteresting.

Recueil des Travaux de la Société Médicale Allemande de Paris. Publié par R. LIEBREICH, Président de la Société; et L. LAQUEUR, Secrétaire de la Société. pp. 158. Paris: Masson. 1865.—This very valuable volume contains more original matter than many of the more bulky tomes issued by societies of greater pretension. The memoirs on the Membranes and Canals of the Snail, by Lowenberg; on the Structure of the Nervous System, by Mauthner; on the Structure of the Lymphatic Ganglia, by Halbertsma; on Variola and Vaccinia, by Auzias Turenne; and on the Vascular System of the Human Eye, by Th. Leber,—are elaborate and able dissertations, representing actual scientific work of value. Among the more practical papers is one by the very accomplished and justly distinguished editor, M. Liebreich, describing a little instrument for occluding temporarily the lachrymal canals when atropine is instilled into the eye, and destined to avert the production of any unpleasant constitutional symptoms; also a very practical paper by Mr. J. B. Rottenstein, describing an improved means of treatment of Congenital Fissure of the Palate in order to obtain normal pronunciation. M. Rottenstein has had great success in this matter, and has achieved a reputation in the best Parisian circles; and we commend his paper to the notice of our English dentists, amongst whom Mr. Sercombe, Mr. Vasey, Mr. Ramsay, and others, have given attention to the subject, and have had excellent results by simple means. Mr. Sercombe's apparatus especially has successfully stood the test of time and long use, and has not been superseded by any of the more complex and very clever arrangements introduced by Preterre, Kingsley, and others. The subject is one equally interesting to surgeons and dentists, and they would alike be edified by a perusal of M. Rottenstein's paper.

The Fortnightly Review. London: Chapman and Hall.—The articles in the two March numbers embrace a wide range of subjects, and, more than is the case of any other periodical, express a variety, not to say a conflict, of opinion. Mr. Bagehot continues his papers on the English Constitution; the last one, on the House of Commons, besides being conspicuously able, like its predecessors, has a special interest at the present time. Mr. W. W. Wilkins discusses "The Ancient Britons;" and really seems to show that they were not so savage after all. The current number for April contains, amongst other important papers, one by Mr. Ernest Hart, discussing at length the scheme for Metropolitan Workhouse Infirmaries to which we have referred elsewhere.

Popular Science Review. April. London: Hardwicke.—This month's number contains, amongst other interesting articles, one upon "Entozoon-like Bodies in Animals destroyed by Cattle Plague," by Dr. Lionel Beale. There is also an article, by Professor Voelcker, "On the Adulteration of Milk," in which he gives the result of the analyses of several samples from different districts. In some cases he found that milk was being retailed, to the poor particularly, adulterated with water to the extent of thirty or forty per cent.; and, in the Strand district, out of nine samples, only one was found to be "good, genuine, and pure milk."

Science Gossip. April. London: Hardwicke.—This little periodical of chit-chat on scientific subjects has now reached its sixteenth number, and has fully realised our expectations of a year ago. It is now an established fact. Judging from the correspondence, it seems to be well taken up by amateurs, and there are from time to time very valuable little notices by members of our learned societies. The illustrations are good, and there are many of them. In the present number there is an interesting article (illustrated) entitled "What is Jute?" the perusal of which will place the reader in possession of facts not generally known.

THE Odontological Society held its monthly meeting at Soho-square on the 2nd inst. Dr. Rottenstein, of Paris, sent for exhibition a stomatoscope for illuminating the mouth as well as larynx by galvanic means. A paper was read by Mr. Sidney Longhurst on "Lateral Abnormalities;" the irregularities of the lateral incisor teeth, the frequent additional number, their absence, their being occasionally germinated, and their tendency to produce abscess of the palate, were the chief points considered.

THE LANCET.

LONDON: SATURDAY, APRIL 14, 1866.

IT is not for us to anticipate what may be the recommendations of Dr. EDWARD SMITH and Mr. FARNALL, who are now following officially in the footsteps of our Commissioners in the investigation of the condition of the infirmaries of the metropolitan workhouses. Had the appointment preceded the labours of our Commissioners, instead of following upon them, they would have found in most of the houses a state of things much worse than they will now find. Much of the patchwork improvement, and many of the minor although substantial reforms which could be effected off-hand and under the existing management, have been already carried out, as the immediate result of the strictures which have been published in our columns and the suggestions contained in the reports of our Commissioners. Thus at Bermondsey and at Shoreditch the resolution has been taken to employ a staff of paid nurses; at Lewisham, considerable structural improvements have been made; at St. Giles's, a more liberal dietary has been introduced; at the Strand Union, measures have been taken to construct a new infirmary in the suburbs; at St. Pancras, further nurses have been employed and other improvements made; at St. Marylebone, two night-nurses have been engaged, and baths, towels, and hair-brushes have been multiplied. Our suggestions have also been adopted in many important particulars, we believe, at Lambeth and at St. George-the-Martyr; and no doubt other alterations have been made elsewhere which have not come under our notice as these chance to have done. So far our labours have already been rewarded by such considerable and important ameliorations in the condition of the sick poor as are in themselves a splendid compensation; and the difficult and invidious duties of criticism have been performed with so much care and discretion that these reports have become standard models, and, after having been brought successively to the test of severe criticism from those whose management they impugn, we are able to reissue them, unaltered and intact, in a separate and convenient form, for the use of members of Parliament, of the public, and of the profession. They will thus be accessible to many who at present do not possess them; and this reissue is the most convenient answer to the frequent applications which we receive for them separately or in series.

We have an additional reason for this course, in that we desire to present as a whole that view of the interiors which has hitherto been afforded separately and in broken succession; and because we believe that this will afford the strongest grounds for that scheme of complete remodelling which the Association for Improving the Metropolitan Infirmaries, founded upon these reports, has adopted, and which Mr. ERNEST HART has set forward in detail in the current number of the *Fortnightly Review*. That scheme is, in its main features, identical with the project which we have already made familiar to our readers. It is based upon the declaration that the sick poor in the metropolitan workhouse infirmaries have a right to the same advantages of pure air, good baths, efficient ward arrangements, skilled nursing, sufficient and unfettered medical attendance which are supplied to the inmates of the voluntary hospitals. The document which we last week published, and to which were attached the signatures of Dr. WATSON, Dr. BURROWS, Sir JAMES CLARK, Dr. JENNER, Dr. SIEVEKING, Sir WM. FERGUSSON, and Mr. PAGET, laid down a succession of very obvious propositions defining the minimum which could be considered satisfactory under each of these headings. They claim, as we do, for the sick pauper 1000 cubic feet of space; properly constructed wards—i. e., wards properly lighted and ventilated, with baths, lavatories, and water-closets adjacent, and well placed so as not to infect the wards; a paid staff of nurses, considerably below the hospital standard in point of number, but properly trained, and including night-nurses; medical officers, duly remunerated, and not bound to furnish drugs, or charged with the duty of dispensing them; classification of the sick; day-rooms for the infirm and incurable. In what infirmary in this metropolis do we find these things? Not in one. In very few houses are there any of them; in none are there all, nor is it possible to find them all.

Patch up the present system as we may, and it will still continue to be a scandal and a reproach. Foreigners coming over here are not slow to discover that the public hospitals of London, of which we boast so much, accommodate but a small portion of the sick. The State hospitals are in workhouse wards. They are closed against observation; they pay no heed to public opinion; they pay no toll to science. They contravene all the rules of hygiene; they are under the management of men profoundly ignorant of hospital rules. They are separate from the world of medical observation, and from the sphere of benevolent and voluntary visitation and aid. The doctor and patient are alike the objects of a pinching parsimony. There is neither uniformity, nor liberality, nor intelligence in the management. If all were present, they must still be badly conducted. For there can be no worse type of hospital steward than the workhouse master; no worse influences under which sick wards can exist than side by side with the wards for able-bodied paupers. To perpetuate thirty-nine bad hospitals where half a dozen good ones will suffice will be an act of grave and dangerous misgovernment. Those who propose it now to Parliament and the nation, at a time when both are ripe to consider, anxious to receive and ready to find the funds for a large and comprehensive scheme, will incur the reproach of obstructing a great work; of churlishly checking impulses at once wise and generous; of thwarting the honourable endeavours of a thoughtful and influential body of men, whose views are entirely and emphatically endorsed by those whose deliberate judgment is tantamount to an authoritative decision; and of delaying perhaps for a long time—although we may be sure it will not be more than delaying—the realization of a plan which is fraught, not only with the purest philanthropy, but with the most real economy both of life and money. We earnestly hope that Mr. VILLIERS will prove himself equal to the occasion, and will make to the deputation which will to-day lay before him the resolutions passed at Willis's Rooms such declarations as may show that he is prepared to adopt no half-measures, no petty compromises with local boards, but to do that which this Association

will demand for the sick poor on the strength of the case established by our Commissioners, and the written declarations made by the leaders of the medical profession—to separate the sick poor from the able-bodied, and to supply for them consolidated infirmaries under skilled management.

Some evil auguries have been drawn by the *Pall-mall Gazette* from the appointment of Dr. EDWARD SMITH and Mr. FARNALL to "inquire" about a state of things which is already pretty well known. But we are unable to suppose that a medical man so placed will find it in his conscience, or in accordance with his intellectual estimate of his own powers and just influence, to throw any doubt on the conclusions of such men as those before mentioned whose experience has been put into words on this subject.

THE mortality of children is a puzzling subject either to the moralist or to the physician. That so large a proportion of human beings should die almost as soon as they are born, and before fulfilling any of the great functions of human life, is at least a curious fact, and one which must have perplexed most thinking men. We are indebted to Dr. FARR for bringing the matter into European notice. He has lately read a paper to the Statistical Society, printed in their journal for March, in which he gives us the principal statistical facts concerning infant mortality in England and Wales. And he has appended to his paper very interesting answers to various questions which he has put on the subject to several of the most eminent statists in Europe. The view taken by Dr. FARR, as might be expected from the nature of his audience, is a statistical one. His paper is, therefore, less interesting to us than it would have been had he treated the question more from a medical point of view. But we are not the less obliged to him for what he has done. Infant mortality is a subject of importance to all the States of Europe. Human life—partly from the demand for it, or what must immediately be the demand for it both in Europe and America—was never so precious as it is now. And apart from the intrinsic value of infant life, human happiness is very much marred by infantile deaths. They occasion an amount of misery not to be explained by the calculations of political economy. If all this be true, then Dr. FARR has chosen a topic worthy of his own attention and that of the Statistical Society.

We shall try to put before our readers, in as brief a way as possible, the principal facts which Dr. FARR has established, and upon which he comments. We are glad at the very outset to give prominence to what is evidently one of Dr. FARR's favourite opinions—that infanticide is not a common crime, nor in any country the cause of any considerable number of deaths. He is at special pains to refute the statements of the Abbé CESARE CONTINI in the journal of the Statistical Society of Paris as to the frequency of this crime in England. The Abbé has evidently over-coloured his representation of our sins in this matter. But while we may concede to Dr. FARR that this crime is not a common one, we must ask him to admit that it is not a rare one, that it is becoming less rare every year, and that the public mind is getting very seriously familiarised with it and with the lenient treatment of it at the hands of juries. Only last week we directed attention to the steady increase of it in the experience of Dr. LANKESTER. Dr. FARR speaks of 180 cases of murder or manslaughter of children under five years of age in all England in 1862; Dr. LANKESTER of 114 cases of infanticide in the last year in his own district. We can scarcely reconcile these figures, though they refer to different years. Either Dr. LANKESTER's district is pre-eminently infanticidal, or Dr. FARR's figures do not accurately represent the whole child-murder of the kingdom. Probably Dr. LANKESTER and Dr. FARR would differ in opinion as to the amount of actual infanticide which obtains. Many a case which appears in Dr. FARR's returns under "accidental death," "neglect at birth," or some other euphemism, will appear to coroners as to all intents and purposes a case of infanticide. We can have no wish to exaggerate on this subject. On the other hand, it is very important that the exact truth should be known.

Whatever the prevalence of actual infanticide, all will agree that as a cause of the destruction of infant life it is quite unimportant compared with other causes of the nature of disease. Let us now see what is the amount of infant mortality, and how we stand in this respect in comparison with other countries. Dr. FARR has appended to his paper tables of great value, which enable us at a glance to see the amount of mortality in all the principal countries of Europe in relation to the population. Without attempting a minute analysis of tables which will be invaluable for reference, we may quote the following paragraphs from Dr. FARR's paper, which give the chief facts:—

"Out of 100 children born in Norway, 83 attain the age of five years; in Sweden, 80; in Denmark, 80, including Schleswig and Holstein, down to the Elbe, the country of the Angles of old; in England, 74; in Belgium, 73; in France, 71; in Prussia, 68; in Holland, 67; in Austria, 64; in Spain, 64; in Russia, 62; in Italy, 61.

"Thus the chance is always in favour of the life; but here it is 8 to 2, there only 3 to 2.

"What is the proportion of *deaths* under the age of five out of 100 children that see the light? In Norway, 17; Denmark, 20; Sweden, 20; England, 26; Belgium, 27; France, 29; Prussia, 32; Holland, 33; Austria, 36; Spain, 36; Russia, 38; Italy 39."

It will be seen that we lose nine more children under five years of age than die in Norway. To prove that so many as twenty-six children need not die in England under five years of age, Dr. FARR shows that there are two classes—the peers and the clergy—in which only 10 per cent. of the children of these ages die. And in Table VI. of the Appendix it is shown that in certain healthier districts of England the mortality, which in the large towns is at the annual rate of 10 per cent., is only 4 per cent. We are in the habit of boasting of the healthiness of our country and the robustness of the English people. The Registrar-General is largely responsible for this. In the Spring Quarterly Report for 1856 he said, "It is now well established by extensive observation that England is the healthiest country in Europe." Are we still to receive this statement as absolutely true? There are certain little islands—the Faroe Islands, belonging to Denmark—which enjoy a far higher state of health than we do, and especially an exemption from phthisical disease altogether remarkable. What is more pertinent to the present discussion, they have a very small infantile mortality, little more than a quarter of all the deaths occurring under ten years of age; whereas in England more than a third of the deaths, and in some populous towns and counties half of the deaths, probably happen before five years of age.

To confine our attention, however, to Norway, which Dr. FARR has honoured by holding up as a model in this respect to other European countries: What are the peculiarities of Norway which may be supposed to be favourable to the continuance of infant life? A very interesting answer to this question, by Professor ASCHOUG of Christiania, will be found appended to Dr. FARR's paper, in which the learned Professor states briefly the peculiarities of Norway as affecting children. More briefly we may state them thus:—"In the first year of life the children are suckled by their mothers;" afterwards the diet is most simple and frugal—potatoes, cakes and porridge made from oatmeal, or bigg and coffee, generally without sugar. In the interior dried pork, and on the coast fish, enter largely into the diet. The redeeming feature of the diet is a very considerable quantity of milk. "To a population of 1,700,000, we have 800,000 horned cattle." Still, children only get "their share" of milk. The Professor says they are not ruddy or robust-looking, and he does not think that the low rate of mortality is to be explained by their diet. The temperature is low. This would rather seem adverse to life; but where it does not kill, as it certainly will in some cases, it seems to make hardy. A very important part of the explanation of the low rate of infantile mortality is in the excessively rural condition of the people. They do not even live in villages, but in detached farms and cottages. In Table I. of the Appendix Dr. FARR shows that there is a larger area to each person in Norway than in any other European country, or even in the United States. Again, the houses are made of wood, and, being built upon dry rock, are not damp. Lastly, "low marshy ground of large extent is almost unknown."

We cannot continue this interesting subject, though we would gladly have done so, and discussed, if possible, the medical bearings of it. The principal diseases which destroy the life of the young amongst us are convulsions, atrophy, measles, scarlatina, diarrhœa, tabes, premature birth, bronchitis, and pneumonia. These diseases are the result of influences which are well stated by Dr. FARR, and some of them of peculiarities of constitution. Dr. STARK, in his replies to Dr. FARR's queries, points out the remarkably greater frequency of convulsions amongst young children in England than in Scotland. Dr. STARK attributes it to the practice in England of giving spoon meat to children much sooner than in Scotland. This may be partly the explanation. But there is some deeper reason—probably one of diathesis or constitution. If registrars or statists could give us a rough estimate of the proportion of different diatheses or constitutions, or even complexions, they would lay us under still further obligations to them. Meantime we have only to feel thankful to Dr. FARR for bringing this subject so prominently into notice. Few men could have commanded the attentive interest of so many and able statists and physicians as have responded to Dr. FARR's inquiries, and few men could have placed the general facts of the subject so clearly and authoritatively before the unprofessional public as Dr. FARR has done. He has shown us that we are less successful than our Scandinavian neighbours in the preservation of infant life. We have as healthy a climate as they have, and we are certainly not poorer than they are. Dr. FARR's paper is only another illustration of the truth that as England becomes more and more a huge town population we shall have to take more and more trouble and care in order to maintain our national robustness.

THE recent exhibition of obstetrical instruments at the College of Physicians has excited so much interest, and was so remarkably successful, as to render it not improbable that the example will be imitated by the surgeons pure, *par excellence*. To secure equal success, it is therefore desirable to bear in mind what were the leading ideas that characterized the exhibition of the Obstetrical Society. These were sketched out by the President, Dr. BARNES, in his address to the Society in February last. The first requisite was to obtain the true representations of the thoughts and experiences of the most eminent practitioners, past and contemporary, as expressed in the instruments they designed and used. To accomplish this, it was shown that it was not enough to obtain collections of instruments from makers, however skilful and eminent. Instruments differ from books. They cannot be multiplied indefinitely preserving the exact form of the original; they are therefore constantly liable to undergo modifications in the workshop, and in time to lose all the points which the inventor would have wished to retain. Some instructive illustrations of this process of degradation or change might have been seen in this exhibition. Certainly several of our leading obstetric authorities would have repudiated some of the instruments exhibited by makers in their name. Mr. ROBERTON alone seems to have taken proper care to preserve the original form of his instruments. The description attached to his case shows that he supplied the maker with a copper model of his forceps, from which all the copies issued are made. Almost all the principal instruments were directly authenticated by the inventors, and thus the exhibition acquired special value and authority. Another design—one, upon the whole, well carried out—was to illustrate the history of invention, and the modifications undergone by instruments, in different ages and countries. It was also sought to exhibit, side by side, the instruments used by different practitioners at home and abroad; thus illustrating what may be called *comparative obstetric practice*. No feature in the exhibition was more full of interest than this. It was singularly instructive to observe how widely different were the material implements employed on the Continent and in Great Britain in overcoming what must be essentially the same physical difficulties. How great was the contrast between the perforators, crotchets, and craniotomy forceps of this country, and the cephalotribes of the Continent! Which ought to be chosen? Are English practitioners quite right in discarding the more powerful instruments of their brethren? This and many other serious questions must have already disturbed convictions that seemed immovably settled in the calm of stagnation for want of the agitating impulse of comparison. That this great exhibition will extend knowledge, promote a better mutual appreciation amongst the obstetric practitioners of all countries, and modify the practice of midwifery at home and abroad, there can be no doubt. And these results will redound to the credit of the Obstetrical Society of London and of its officers, whose sagacity and liberal enterprise conceived and executed this truly noble undertaking.

A SEPARATE department has been formed for the transaction of business relating to the cattle plague. Communications on the subject to be addressed to Colonel Harness, R.E., C.B., Cattle-plague Department, 7, Westminster Chambers, Victoria-street, S.W.

Medical Annotations.

"Ne quid nimis."

THE LONDON GUARDIANS AND THE SICK POOR.

THE guardians of several of the London parishes have resented in various ways the observations of the Archbishop of York at the meeting at Willis's Rooms. The letters addressed to the Archbishop have received in each instance an appropriate reply. The St. George's guardians, who are trying to raise a side issue by taking to themselves statements which have never been applied to their particular house, are reminded by his Grace: "I expressly said, as did other speakers, that each statement was to be taken as of general, and not of universal application. The infirmaries of St. George, Hanover-square, being those of a very rich district, are probably in better condition than most of the others. I shall be prepared to justify what I said at the meeting at Willis's Rooms on all proper occasions. All the information I have received since the meeting has shown me the evils of the present system, and the urgent need of interference, even at the risk of official insult." The St. Pancras guardians were referred to the recent inquiry and the evidence of their own officers as a patent proof that the statements complained of were fully justified. Since that investigation the guardians have held a further inquiry, calling their officers to account for their evidence. Thus the resident surgeon was asked how he dared to say that he had so large a number of patients to look after; to which he naïvely and truly replied that the figures were not stated by him, but were put to him in the form of a question, and as they were accurate, and as he was on his oath, it would be difficult even for the guardians to hold that he ought not to have admitted that they were so. The Strand Guardians have also claimed exemption from censure for their badly-managed institution — close, overcrowded, ill-built, badly nursed, and the scene of the carpet-beating scandal and of the pauper potboy-nurse story, which was told at the Willis's Rooms meeting, and has been amply confirmed. The Archbishop's reply has not been printed; it was, however, so little palatable to the guardians that it was suggested that a variation in the usual form of business should be adopted, and that it should be *flung* under the table.

VACCINATION IN SCOTLAND.

AN exceedingly instructive report has recently been published by the Registrar-General for Scotland on the results of vaccination in that kingdom during 1864. The Scottish Vaccination Act came into operation on the 1st of January of that year. This Act differed from the English vaccination laws in making provision for the registration of vaccination in the sub-district in which the birth was registered; in throwing the responsibility of the registration, under fine, upon the parents of the children; in enabling local authorities more readily to take proceedings against negligent parents, by not requiring it to be proved first that a particular form of notice was, at the time the birth was registered, delivered to the parents; and by giving the Board of Supervision power to modify the provisions of the Act to meet the requirements of certain districts. In the Vaccination Bill now under the consideration of Parliament it is sought to approximate, in these respects, the English to the Scottish law.

How effectively the Scottish Vaccination Act has met the requirements of that division of the kingdom is shown by the report under consideration. It would appear that during the year 1864, 112,559 births were entered on the birth registers of Scotland, of which number 3708 were those of children who, having been born prior to the 1st of January, 1864, did not come under the operation of the Vaccination Act. That number therefore being deducted, would leave 108,851 children in Scotland in 1864 under the operation of the Act. Of these children no less than 95,047, being 87·32 per cent. of the whole, were successfully vaccinated; 662, or 0·61 per cent., had their vaccination postponed from ill-health or other causes; 1261, or 1·15 per cent., were found to be insusceptible of vaccination (but of these the insusceptibility arose from the child having been previously vaccinated in 440 cases, from the child having had small-pox in 154 cases, while in 667 cases it arose from constitutional insusceptibility); 9180 children, or 8·44 per cent., died before vaccination could be performed; while 2701 children, or 2·48 per cent., had removed from the district before vaccination could be enforced, or were otherwise unaccounted for.

These figures do not, however, bring out the full success of the Vaccination Act, so as to make it patent to every mind. "What we are specially interested in ascertaining," the Registrar-General remarks, "is not the proportion successfully vaccinated out of the total number of children whose births are entered on the registers, for that includes all who died previous to vaccination; but we wish to ascertain what proportion of children, who survived till they were vaccinated, were protected by vaccination." To effect this it is necessary to deduct from the 108,851 children who came under the operation of the Act, the 9180 who died before vaccination was attempted. This leaves 99,671 living children to be operated upon, and thus vaccination gives the true success of the Act, and is of extreme interest.

Of these 99,671 children, 95,047, or 95·36 per cent., were successfully vaccinated. To these must be added all those found insusceptible of the vaccine virus from having been previously successfully vaccinated by clergymen, midwives, or others, all who had had small-pox, and all who were constitutionally insusceptible. Thus the really protected children amounted to 96,308, or to 96·62 per cent. "As all those whose vaccination is postponed," adds the Registrar-General, "are being looked after, and those who survive will be vaccinated, this gives us a total of 96,970 out of 99,671, or a total proportion of 97·29 in every 100 children, protected as far as may be from the ravages of small-pox. In fact it accounts for every living child, excepting the 2701 who have been lost sight of, from their parents having removed to other parishes. Only the small proportion, therefore, of 2·71 per cent. remains unprotected by vaccination of all the living children who came under the operation of the Vaccination Act in 1864."

When will a like admirable result be shown for England? It is too early as yet to determine the effects of this energetic execution of the Vaccination Act upon small-pox in Scotland; but it is not unreasonable to suppose that a remarkable diminution of deaths from this cause in 1865 was largely due to the more fully protected state of the population.

THE VOLUNTEER MEDICAL STAFF AT BRIGHTON.

WE must congratulate the volunteer medical service upon their attendance at the late review. More than one hundred medical officers accompanied their respective corps upon the ground, taking upon themselves this onerous and additional labour, their services being not only gratuitous, but entailing actual loss by their absence from home. However, we have much pleasure in recording a just though tardy appreciation of their valuable assistance upon the part of the authorities at the War Office. In the General Order of the Inspector-general of Volunteers an announcement was made that the field hospitals would be under the charge of Surgeon Burrows, the brigade surgeon of the 1st Administrative Brigade of the Sussex Volunteer Artillery. This appointment gave universal satisfaction to the entire medical staff, and it was fully deserved. This gentleman has been indefatigable in his exertions in the volunteer movement, not only as a most valuable medical officer to a large brigade, but also as a member

of the Brighton corporation and Race Committee. Upon the latter devolves a most serious responsibility—the reimbursing the agriculturists for the damage occasioned by holding these great military displays upon the Sussex Downs. It should be remembered that Surgeon Burrows has been twice elected Mayor of Brighton, and four years since he offered his individual guarantee to the farmers for the loss of their crops caused by the review. If we add that during many years Mr. Burrows has fought the battle of sanitary reform in the corporation, it must be allowed that the appointment by Colonel Erskine was likely to be most highly approved by the whole medical staff.

The hospital arrangements of the day were most complete and resembled those of last year; the temporary hospital at the race-stand being fitted up with eight beds, and every appliance of surgery being upon the spot ready for any emergency, however severe. At Bevendean, also, beds were prepared; and likewise at the Industrial Schools. These temporary establishments were under the charge of Surgeon Burrows, assisted by Surgeon Spencer Smith (Civil Service) and Surgeon Steet (Finsbury Volunteers); Surgeon Wakley (Surrey Light Horse) superintending the staff orders. The ambulances, with a detachment of the Military Train, were under the command of Ensign Phibbs. One ambulance waggon followed in the rear of each division of the force, ready to bring in any casualties. Sergeant-Major Ward, with six men of the hospital corps from Netley, were also in attendance at the disposal of the medical staff. Fortunately the casualties were few in number, and the accidents slight; but these preparations were precautionary, and reflect great credit upon Surgeon Burrows, upon whom devolved the entire local responsibility. The Reviewing-General expressed his approval of all that had been done.

The following casualties were returned to Colonel Erskine, the Inspector-General of Volunteers, by the field surgeon of the day:—

Private Heasell, 2nd Hants Artillery: Sprained ankle.

Corporal O'Connor, London Irish: Injury to foot.

W. Sayers, spectator: Fracture of fibula and displacement of ankle.

THE MEDICAL COUNCIL.

WE learn with satisfaction that Dr. Sharpey has been reappointed by the Queen in Council as one of the Crown members of the Medical Council of Education and Registration. For the reasons that we gave last week, in discussing this measure by anticipation, we believe that the reappointment of Dr. Sharpey is a source of strength and usefulness to the Council. It would be equally prejudicial to that Board to establish a rule of re-election or of successive change on every fresh occasion. The probability is that the Council will not meet in future for more than a week once a year, and then the five years' service will probably be limited to a comparatively small number of days, Branch Council meetings included. The perpetuation of the same elements by any representative body is not desirable, although a total renewal at each quinquennial period would be equally mischievous. Thus far the Crown nominations have been excellent, and have supplied to the Council some of its most able, independent and progressive members.

THE VACCINATION BILL.

IN opening the debate on Wednesday night on the Vaccination Bill, Mr. Bruce made an interesting and instructive statement, clearly showing the necessity for improved legislation on the subject. The average death-rate from small-pox when vaccination was not compulsory but gratuitous was 304 per million; the average since it had been to a certain extent compulsory was 171, if including the last year, only 109, per million (from 1854 to 1863). In 1863 the deaths rose to 7684. Mr. Marson, of the Small-pox Hospital, states the mortality amongst unvaccinated as 70 per 1000; among the vaccinated, 5 per 1000 amongst the well-vaccinated, and 150 per 1000 amongst the ill-vaccinated. Vaccination is still imperfectly resorted to. Thirteen per cent. of children at public infant schools are still unvaccinated, and when performed it is frequently done in a very incomplete manner, four vesicles being necessary to produce perfect vaccination. The provisions of the Act of 1853 were not wise, and also very badly carried out. Among 694 districts only 64 were found where the contractor followed the plan prescribed by his contract. In 458 the places of public vaccination were quite disregarded; in 252 the registrar of births did not notify any fixed appointment for public vaccination, or differed from those the guardians had fixed. The principal objects of the present Bill are to give the Poor-law Board power to re-arrange the districts as often as they think proper, to revise the contracts, to secure a more complete registration by providing that the certificate of vaccination shall be sent to the registrar of the birth; the rate of payment to be the same as before, but for fixed districts instead of whole unions, and to be paid for duty performed at workhouses. Increased facilities to be given to guardians for enforcing the law. In principle the Bill will make every man responsible for the non-vaccination of his child. We are glad to find Mr. Henley and Sir Robert Peel insisting on the capital defect of the Bill, which we had already pointed out—that the fee is too small, and the guardians unfit to be entrusted with the thankless duty of prosecuting. The Bill was referred to a select committee.

ALCOHOLIC TREATMENT OF DISEASE.

IN a report of the proceedings of a temperance meeting at Limehouse we find the following statements and statistics, purporting to have fallen from Dr. Edward Moore, who was in the chair:—

"As a medical practitioner, he was sure that, while alcoholic liquors as beverages were never necessary, they were injurious in nine hundred and ninety-nine cases out of a thousand; and even as to their medicinal value he was happy to say that the opinions and practice of the faculty were undergoing a very important and salutary change. Facts were compelling the profession to renounce the theory of the late Dr. Todd, and with it the 'stimulating treatment' to which it led. An experiment had been made in the treatment of 100 cases of inflammation of the lungs. Out of 35 patients treated with brandy, 30 died; of 35 supplied with milk and a light diet, 32 recovered; and of 30 who were treated on the old principle with tartar emetic, calomel, &c., 17 recovered and 13 died. It was thus seen that even the old lowering plan was much superior to the stimulating system, and that an absence of alcohol with light nutritious food was far superior to them both."

Of course the statement was much applauded; and we should be glad to have some further particulars of this trenchant experiment. The contrast is beautifully marked: 30 died out of 35 treated with brandy; 32 recovered out of 35 supplied with milk and a light diet. Who treated the cases, and where? Who vouches for similarity of the cases, and who watches the experiment? What did the patients get besides the brandy with which they were *treated* in the one case, and the milk with which they were *supplied* in the other?

PROFESSOR HUXLEY'S LECTURES AT THE ROYAL COLLEGE OF SURGEONS.

THE third family of the *Delphinoidea*—namely, the *Micropterida*—is the most difficult one, and the one concerning which more confusion appears to prevail than is the case with the others. Its common characters, which constitute its definition, are—1, paddles very small (whence the name of the family); 2, no functional teeth in the upper jaw; 3, pterygoid bones united together in the middle line; 4, periotic bone

attached to the skull, not falling out, as in so many cetaceans; 5, anterior ribs united to both the bodies and the transverse processes of their respective vertebræ, but the posterior ones to the bodies only—the tubercular process becoming aborted; 6, sternal ribs cartilaginous; 7, cervical vertebræ more or less anchylosed together.

As regards size and economical value, some of the forms contained in this family rival the whalebone whales; indeed, the capture of the former constitutes the more important fishery of the two. This family, also, is the only one which contains remarkable fossil forms. It is divisible into two subordinate groups—(A) the *Rhynchoceti* and (B) the *Physeterini*. Of the first group the bottle-nosed whale of Hunter (*Hyperoodon*) may best be taken as a type. This species appears to attain a length of about twenty-eight feet, but, inasmuch as females are much more frequently obtained than are males, it is possible that the males may attain a considerably larger size; and this is the less improbable because such a dissimilarity exists between the sexes of the sperm whale. Should this be the case, it would account for certain skulls which are much larger than those known to belong to the ordinary bottle-nosed whale, such, for instance, as the skull in the British Museum named *H. latifrons*. In *Hyperoodon* the cervical vertebræ are all anchylosed together, and form one mass. There are only nine dorsal vertebræ, and they are furnished with exceedingly prolonged spinous processes. The ribs have, of course, the peculiarity mentioned amongst the common characters given above, and the costal cartilages do not ossify. The sternum is cleft at its posterior end, and the manubrium is perforated, even in the adult. The maxillæ show no traces of alveoli; the premaxillæ take only a small part in the formation of the rostrum. The palatines form but a very minute portion of the palate, but the pterygoids are very large, and together form a vertical median septum. The maxilla sends up an enormous process, somewhat like that of *Platanista*, only larger. The nares are very unsymmetrical, and the large nasals are placed quite on the very summit of the skull. The lachrymal is a distinct bone; the mandible has a rather long symphysis, and the alveoli in it have almost entirely disappeared, except at its anterior end, which is upcurved. The scapula has very large acromion and coracoid processes. The carpus well illustrates the cetacean structure of that segment of the limb. The scaphoid and semilunar bones join the radius, and the cuneiform is attached to the ulna. In the proximal row there are the four usual bones, but the unciform is small, and the metacarpal of the fifth digits ascends, beside it, towards the cuneiform, which, however, it does not quite attain. A cartilaginous structure represents the pisiform. The jaws are furnished internally, towards the distal ends, with horny papillæ, each about half a line or a line in length—reminding us of the sirenian plates or of baleen. In the upper jaw there are a few minute teeth hidden in the mucous membrane, and there is a variable number of similar non-functional teeth in the lower jaw, in addition to two much larger ones. The stomach differs much from that of the porpoise: there are two main divisions, the cardiac one being lined with soft epithelium; the pyloric portion is divided by transverse partitions with as many as six sacs. The intestine is also peculiar, being provided with structures somewhat like the water-cells of the camel's stomach.

The family *Micropteridæ* consists of the following genera:—

(A) *Rhynchoceti.*	(B) *Physeterini.*
Hyperoodon.	*Physeter.*
Berardius.	*Euphysetes.*
Ziphius.	
Ziphiorhynchus.	
Choneziphius.	
Micropteron.	
Dioplodon.	
Belemnoziphius.	

Of these genera, *Berardius*, *Ziphius*, and *Dioplodon* are only known by their crania, and the genera *Choneziphius* and *Belemnoziphius* are fossil forms; in the latter the whole of the median ethmoid is ossified, which must have rendered its javelin-like snout a very formidable weapon. The sperm whale (*Physeter*) attains a length of fifty or sixty feet. The cervical vertebræ are more or less united together, and the atlas is destitute of any considerable transverse process. Sometimes some of the dorsal vertebræ simulate cervical ones, from the extension of the small upper (or tubercular) transverse process downwards to join the large inferior (capitular) one. The sternum consists of three pairs of bony elements. The skull is very peculiar, and its form has obtained for the animal the name of "pot fish," as it has a basin-like concavity on its upper surface, which, during life, is occupied by spermaceti. The nares are very unsymmetrical, but the nasals are not so large as in *Hyperoodon*, and are not situated on the summit of the head. The malar is large, the periotic very small. The sperm whale is one of the most remarkable of all the cetaceans in external appearance, on account of the vast size of its head and its great truncated snout, which yields about a ton of the spermaceti-fluid during life. The spiracle is situated at the end of the snout (the nasal passage being sometimes twenty feet long) and the expiratory column is spouted forwards and over to one side. The pectoral fins are very small, as is also the dorsal fin. The trunk is furnished with a quantity of blubber, which yields sperm oil. The other member of the *Physeterini*, *Euphysetes*, resembles the sperm whale, except that it is very much smaller (only ten or twelve feet long), and that the head is only about one-third the length of the body.

THIRD ANNUAL REPORT OF THE CORONER FOR CENTRAL MIDDLESEX,

Read at a Meeting of the Social Science Association, March 21st; Dr. FARR *in the chair.*

THE facts brought forward in these reports possess the greatest interest, and have at all times been so favourably received that we will endeavour to present our readers with the most striking points in relation to some questions of social importance. The total number of inquests tabulated under the heads of "natural deaths," "accidental deaths," "suicides," "homicides," "infanticides," and "unknown causes" amounts in one year to 1246. The number of inquests held annually in the large parishes is in proportion to the population—St. Pancras, 1 in 550; St. Marylebone, 1 in 666; Clerkenwell, 1 in 655; Paddington, 1 in 652; Islington, 1 in 721; St. Giles, 1 in 409. In public institutions, hospitals, lunatic asylums, and prisons 253 inquests were held. Inquests are held on all persons being prisoners who die within the walls of a prison. In the Clerkenwell House of Correction there appears a considerable increase, showing, out of forty-three deaths during the year, twenty-three cases of pulmonary disease. The verdict of "unsoundness of mind" delivered by coroners' juries, which was called in question in the suicide of Townley, brings out some remarks of the Coroner worthy of the attention of our Legislature as to whether some further alteration in the law of *felo de se* is not expedient at the present day. In the table of "deaths from natural causes" 635 inquests are recorded; and in this class Dr. Lankester draws attention to that group which are regarded as preventable, or those which are propagated by poisons, and are more or less under the control of human agency. Alluding to typhus fever, small-pox, &c., he says:—

"Although it has not been usual in these cases to hold inquiries when a medical certificate of death has been given, there is no doubt that not only has the coroner the power, but that it is his duty, to hold inquests in those cases where he suspects that a death has been occasioned by a preventable cause. In many cases of zymotic disease the cause is so obviously dependent on some neglect or deficiency for which some persons are liable, that it is only necessary to call public attention to the existence of these causes at once to put an end to the spread of disease. It is much to be regretted that any difference of opinion should be entertained on this subject, and that the coroner is so seldom informed of the occurrence of cases of this kind when medical certificates have been given. The cases are very numerous in which such inquiries have been held with the best possible results, and it cannot be too widely known amongst medical officers of health that one of the most powerful aids provided by the law of the country for arresting the spread of preventable disease is the Coroner's Court."

The deaths from accidental causes in 1864 and 1865 amount to 346. A lamentable number of deaths amongst females, and children under five years of age, occur from burning and scalds, of which the principal causes are—(1) neglect of using fire-guards; (2) the inflammable nature of linen and cotton clothing; (3) the prevailing fashion of women wearing cotton dresses distended by crinoline.

A group of deaths, 113 in number, demanding attention, the subjects of which are children under one year old, is that of suffocation in bed. This large amount of destruction of infant life arises from (1) ignorance, (2) carelessness, (3) overcrowding, (4) overwork, and (5) drunkenness.

Deaths from accidental and mechanical injuries show a considerable increase. Fatal railway accidents have increased from 13 to 24; those in the streets, from 39 to 57. The Registrar-General has pointed out the fact that above 200 fatal cases occurred in the streets of London in the year 1865; and it must be remembered that the deaths represent only a small proportion of the sufferings of the community from this cause. The Coroner was furnished by Mr. Hill, the resident medical officer of the Royal Free Hospital, with the following summary of cases in that hospital during the year 1865:—

Cases treated as out-patients	1131
,, ,, in-patients	327
Deaths	31
	1489

thus showing that where one person dies from these accidents, there are forty-eight persons injured. For the whole of London this gives an appalling amount of suffering, which it certainly behoves both the local and imperial Government to make some effort to remove. The following are Dr. Lankester's suggestions of the direction which efforts to diminish these accidents might take:—

1. Regulations with regard to the rate at which vehicles should pass over recognised crossings for foot-passengers, and turning round the corners of streets.

2. More active police interference with vehicles driving at a rapid rate through any of the streets of London.

3. The erection of bridges or subways in the more frequented streets, that foot-passengers might pass without the liability to injury from vehicles.

4. The encouragement to the utmost extent of railway traffic underground, by which the streets would be relieved of their present crowded state.

5. The widening of small streets and the construction of new lateral streets leading from one great thoroughfare to another, so as to relieve the traffic of the great thoroughfares.

6. The abolition of obstructions in greatly frequented thoroughfares, such as Temple-bar in Fleet-street, Middle-row in Holborn, and many others.

The verdicts of death by suicide are 77, former years giving 72 and 70. In the poisoning cases, it is to be observed that the poisoning is effected with the most easily obtained poisons, which are opium, cyanide of potassium, and oxalic acid. Not one case of poisoning by arsenic has occurred during three years. The class of cases under the head of "Murder and Manslaughter" includes infanticide. And Table IX., although relating more to the destruction of infant than adult life, gives only an analysis of verdicts, and does not indicate the extent or probable amount of wilful destruction of infant life; for, in the table of deaths from unknown causes, it will be seen there are 14 deaths of newly-born children. In 1863 Dr. Lankester held 84 inquests on newly-born children; in 1864, 100; in 1865, 114. In a certain number of instances these children were found dead with their mothers, and another proportion were probably still-born. The question of how these newly-born children came by their deaths is one of deep interest to society; and there is evidently great difference of opinion amongst coroners' juries, and, perhaps, amongst coroners themselves, as to what facts with regard to the death of infants shall justify the verdict of wilful murder. Thus, in the Eastern Division of Middlesex the verdicts of wilful murder on inquests held on children under one year of age were 1 in 31; in the Western District, 1 in 4; in the Central District, 1 in 5; in the City, 1 in 20. In the counties of England, as Lancashire, the discrepancy is greater still, or about 1 in 49 cases. The verdicts of wilful murder (in children under one year) for the whole of England and Wales in 1864 were 203; out of these 99 were in Middlesex: showing in England and Wales one child-murder for 170,000 of the population (one in 20,000 in Middlesex, one in 12,000 in Central and Western Districts of Middlesex).

Dr. Lankester proceeds to point out the principal features of the 174 cases of verdicts of wilful murder returned in his district during the last three years:—

1. The children have been found exposed in the streets, or found in ponds or canals, and under circumstances that leave no doubt that they had been cast away to conceal the facts of their death.

2. These children are mostly newly born, unwashed, and present no indication of the care needful in the season of child-bearing.

3. No attempt has been made to tie the cord of the child, showing that it has been born without assistance, and without proper precautions for the protection of mother and child.

4. In a large proportion of these cases hæmorrhage from neglect of the cord being tied is shown by unequivocal signs, and the suspicion of wilful murder is so great, that women who thus neglect their offspring ought, in the opinion of the Coroner, to take their trial for the offence. Juries are in these cases inclined to give the mothers the benefit of their doubts lest the verdict should lead to a trial and capital punishment.

5. Suffocation by neglect forms another class of cases well recognised by post-mortem appearances. The same excuses are made by juries for not delivering a verdict of wilful murder in these cases as in the last.

6. A large proportion of cases consists of suffocation by violence, showing marks of compression, or finger marks, on the nose or throat, or ligatures tied tightly round the throat, or foreign substances stuffed into the throat or mouth. Drowning is another means. In many of these cases juries are influenced by other instances they have heard about, and deliver verdicts against the conclusions of common sense and reason. The frequent difficulty of proving, as the law requires, that a child is "fully born," often induces coroners to direct an open verdict, and accounts for few verdicts of wilful murder being returned. This will make it evident that we cannot regard the verdicts of coroners' courts as a true indication of the amount of destruction of newly-born infant life in this country. There being no attempts at registration of still-born children leaves open also a wide door for the destruction with impunity of infant life. These and many other considerations make it probable that the high estimate which has startled some, and made others doubt Dr. Lankester's statements on the extent and frequency of this crime, presents a sufficiently grave aspect to invite attention to its causes, and propositions for some remedy.

On this question Dr. Lankester refers to the recommendation of the Commission on Capital Punishment, the purport of which is mainly this, that an Act should be passed making it an offence punishable with penal servitude or imprisonment, at the discretion of the court, for unlawfully and maliciously inflicting grievous bodily harm or serious injury upon a child during its birth, or within seven days afterwards, in case such child should subsequently die.

The Coroner justly observes that punishment is not the most satisfactory way of preventing crime, but rather let attempts be made to remove in this, as in other instances, the causes of crime. Not only, says Dr. Lankester, are the interests of the children, who undoubtedly had the same Divine right to live as any other individual, but the moral and physical welfare of the mother herself, are concerned. There is the manifest danger to the life of the woman from secret delivery which should be prevented. A large amount of female life is annually sacrificed where some skilled person is not at hand to attend her in "the hour of nature's peril."

Amongst the remedies which present themselves for discussion, and which have been proposed, to prevent infanticide, Dr. Lankester refers (too briefly) to the legal measure, which deserves consideration—namely, an alteration of the bastardy laws; so much needed. One great temptation to infanticide would be removed if the difficulty of making the father responsible for his offspring were not so great that few women can procure aid from it. Not one man in fifty contributes to support his bastard child. Improvement in the morality of the sexes, as a social remedy, shows, in a great majority of cases, the conditions of domestic service to be most favourable for the perpetration of infanticide; and, as a remedy, the kindly and sisterly superintendence of young women living in domestic service by their mistresses would prevent the concealment of their pregnant condition and the temptation to destroy their offspring. For it must not be forgotten that this crime is most frequently perpetrated, not in the homes of the poor, but in the houses of the middle and upper classes of society in England.

Dr. Lankester has but little to say in favour of institutions known to the public for a certain amount of good they effect, by protecting unfortunate women from the temptation to destroy their offspring, and by affording a refuge in time of need, where also the children are cared for. The supporters of these institutions are justified in every endeavour to lessen the crime of infanticide. Although the high amount of mortality of

infants in foundling hospitals, workhouses, and other institutions, shows the saving of life to be of doubtful account, yet it is better for society that the child should be lost in the attempt to save its life, than that a large number of women should be living with a consciousness of having sacrificed their offspring.

THE VACCINATION BILL.

A MEETING of medical practitioners was held at the Freemasons' Tavern on Tuesday evening last, the 10th inst., to consider the proposed new legislation in regard to vaccination. Dr. B. W. Richardson presided. After a few words from the Chairman, a resolution was submitted to the meeting by Mr. F. J. Lilley condemnatory of the Bill now under the consideration of Parliament. Mr. Lilley argued that the proposed legislation did not in any degree remedy the cardinal defects of the existing Vaccination Laws. He believed that the principle on which public vaccination was sought to be carried out at the present time was radically wrong. Every medical practitioner, he held, ought to be a public vaccinator, and as such he should be required to send a certificate of vaccination to the Registrar of Vaccination of every case he vaccinated. For this certificate he should be paid a moderate fee—say 1*s.* or 1*s.* 6*d.* The fee should be paid for the certificate, not for the operation; and the provision for public vaccination, in which the operation itself also would require to be paid for out of public funds, should be restricted to paupers. Vaccination would be made compulsory on parents as at present.

Mr. Lilley showed in a highly ingenious manner how his scheme would meet certain defects of the proposed and existing systems of legislation; and he was prepared to submit a rough draft of a Bill, drawn up in accordance with his views, if the meeting were disposed to reconsider an entire modification of the existing Vaccination Laws.

Mr. Lilley was supported, with some reservations, by Mr. Jabez Hogg and Mr. R. W. Dunn; and a very active discussion followed. The majority of the meeting, however, were of opinion that it was clearly too late to attempt, with any probability of success or beneficial result, to open out so wide a question as that which Mr. Lilley had submitted; and it was urged by several speakers that the time of the meeting would probably be best occupied in criticising the details of the proposed Bill, and endeavouring to rectify such defects as existed in it. Dr. John Dixon especially, in a capital speech, which carried with him the meeting, showed that the proposed Bill dealt with the defects of existing legislation, and provided for a more effective carrying-out of public vaccination, much more fully and satisfactorily than Mr. Lilley had supposed. He showed how carefully it had been constructed to meet certain well-ascertained imperfections in the existing laws, and how it might meet the actual requirements of the kingdom. He showed also that, by certain slight modifications of detail, the Bill might be carried out more easily and with less tax upon the public vaccinator's time. And, finally, he proved that the cardinal error in the Bill in its existing state was the inadequacy of the minimum fees provided for vaccination. It was simply absurd to suppose that so nice a matter as vaccination could ever be carried out in the way it should be, and made so thorough a safeguard to the public health as it ought to be, unless a higher rate of remuneration than that proposed in the Bill were secured to the public vaccinator. Dr. Robert Fowler, Mr. Blackman, Mr. Whiteman, and other gentlemen, supported Dr. Dixon; and in the course of the discussion several curious facts were mentioned, showing that, even under the present laws, effective vaccination of certain parishes was secured by the simple means of the guardians paying the public vaccinator a reasonable fee for the work expected from him.

In the end the following resolutions were passed:—

1. "That in the opinion of this meeting the proposed Bill is a great improvement on the existing state of the law, but is capable of some alterations which would render it more effective."

2. "That the fee for successful vaccination be not less than 2*s.* 6*d.*"

3. "That the fee for revaccination be the same as that for primary vaccination."

4. "That if a child be vaccinated unsuccessfully, from arm to arm, three times, and be registered as insusceptible, the vaccinator should have the same fee as for successful vaccination."

5. "That it is desirable that the parents of all vaccinated children should themselves register the vaccination with the registrar of births and deaths."

6. "That clause 16 requires to be remodelled, the question of the child being taken to the public vaccinator when vaccination has been performed by a private medical practitioner being made clearly in the negative."

The meeting requested the Chairman to forward a copy of the resolutions to Mr. Bruce, M.P.; and, after votes of thanks to Mr. Lilley, as the active agent of the meeting, and to Dr. Richardson, as chairman, separated at a late hour.

Correspondence.

"Audi alteram partem."

MEDICAL EVIDENCE.

(LETTER FROM DR. TUKE.)

To the Editor of THE LANCET.

SIR,—I have read with regret a series of papers by Dr. Forbes Winslow, entitled "A Critical Analysis of the Medical Evidence given before the Capital Punishment Commission." My own judgment would have induced me to leave these papers unnoticed, but I am advised that their appearance in your columns makes a reply necessary, and that my silence might be misunderstood.

The title of Dr. Winslow's article is an entire misnomer. In addition to myself, Dr. Hood, one of the Lord Chancellor's Visitors in Lunacy, was summoned before the Commission; but, although his name is mentioned by Dr. Winslow, his important evidence is entirely ignored; and the "analysis," if it can be rightly called an analysis, certainly does not apply to the medical evidence, but to my evidence only.

It will be easily understood that in the difficult task of answering nearly three hundred questions, addressed to me by about a dozen different gentlemen, most of whom, although the foremost men of their day, are more or less ignorant of the first principles of psychological medicine, I may have misunderstood some, or answered others imperfectly. It may be that Dr. Winslow, if summoned, would have succeeded better; but the real point of importance seems to me to be, whether my evidence in its general tenour fairly expresses the views held by the physicians engaged in the same special studies as myself, and to some extent by the profession at large.

Anyone interested in the subject will find in the Blue-book a digest and summary of my evidence, which differs widely from Dr. Winslow's analysis. Dr. Winslow omits any notice of this, and prefers to select for examination some few answers which he severs from their context, and tries to render ridiculous. I can only say that the impartial summary of my evidence drawn up by the officers of the Commission fairly embodies my opinions, which Dr. Winslow's method of analysis necessarily misrepresents. I have not time to follow him through fourteen columns of uncourteous hypercriticism; I only propose to notice those remarks which bear upon subjects of general interest.

Dr. Winslow objects to my considering that lunatics, if allowed to be at large, should be liable to punishment for minor forms of crime, on the ground of public expediency. I cannot, upon further consideration, alter this opinion. If partially insane men cannot be kept from crime by fear of punishment they should not have their freedom at all. The result of Dr. Winslow's opposite conclusion would be, that all lunatics found guilty of minor crime would be confined in an asylum for life. And this, only for the occasional humane intervention

of the jury, would be frequently the case when the defence of lunacy is set up.

In a recent trial for forgery, in which I gave evidence as to the insanity of the prisoner, Baron Martin remarked that the prisoner had undoubtedly committed the forgery, but the verdict of "Not guilty, upon the ground of insanity," would bear hardly upon him, as he would then be sentenced to confinement during her Majesty's pleasure. The jury thereupon brought in a verdict of absolute acquittal. Dr. Winslow goes on to express his wonder that I should believe a jury might "safely" convict a prisoner of murder if punishment by death were abolished. If Dr. Winslow had intended to fairly analyse my evidence he would have quoted Lord Stanley's next question, and my answer, which expresses clearly my meaning, and vindicates me from the imputation of inhumanity which Dr. Winslow strives to fasten upon me.

"Lord Stanley: You mean that if there was a doubt in the case of a man sentenced to penal servitude for life it would probably very soon be discovered in prison whether he was sane or not, and that if he were insane the error could be corrected?

"Witness: Yes."

I am at a loss to understand Dr. Winslow's indignant surprise at my answer to the following question.

"Mr. Neate: Is not an increased vivacity of the moral sense, and especially of the religious sense, a symptom of insanity?

"Witness: No; I think not."

Dr. Winslow puts this "*No, I think not,*" into italics, and suggests that I misunderstood the purport of the question. It seems almost incredible that Dr. Winslow could think any other answer possible. Does he really consider that that "lively faith," for the increase of which we are taught to pray, can be taken as an evidence of lunacy? "It is a great mistake," says Lord Shaftesbury, "to believe that true religious feeling can cause insanity." Surely it must be a greater error to imagine that religious fervour is an actual index of mental disease; and yet this appears to be Dr. Winslow's opinion. I am not criticizing Dr. Winslow; I am only defending myself. But there is certainly a strange vagueness in his remarks upon this subject, and it appears to me that his assertion that "an exalted condition of the moral and religious sense is a *common* and *well-recognised* symptom of insanity" is simply nonsense. It is to be noticed that Dr. Winslow, true to his system of analyzing single answers only, does not quote my exception as to cases of "religious mania," in which, of course, exaltation of the religious sense is no doubt the primary symptom, or is, in Dr. Morell's words, "the starting-point of the insanity."

The third point of importance upon which Dr. Winslow comments with much show of honest indignation, is an alleged answer of mine, carefully italicized by him, "that medical advocacy *has become a trade.*" I should be ashamed to have made, I should shrink from defending, an assertion so sweeping and untrue. I have been myself engaged, during the last twelve years, in nearly every important case involving questions of insanity. Could I mean to call myself a "trader"? Is it possible that I mean to convey the impression that such men as Dr. Bucknill—now the first authority on such a subject,—as Dr. Hood, Dr. Sutherland, Dr. Swayne Taylor, Mr. Lawrence, Mr. Solly, and others, are "traders"? I am made to utter this libel upon some of the most distinguished men in their profession by Dr. Winslow's culpable alteration of my words. It may, of course, have been his carelessness only; but even so it is inexcusable. That which I really said was in answer to a hypothetical question put by Lord Stanley; and it stands thus in the Blue-book:—

"Lord Stanley: You think it hardly creditable to the medical profession that, upon every occasion, two of the most eminent medical authorities who can be found should be brought forward, one, as far as facts allow, directly to contradict the evidence of the other?

"Dr. Tuke: Yes; medical advocacy thus becomes a trade."

It is obvious that the change of "thus becomes" into the italicized *has become*, is no printer's error, but a "mistake" of Dr. Winslow's, which it is for him to explain. It is singular that this answer of mine, correctly quoted, is noticed with approval in the current number of the *Temple Bar Magazine*, in an article evidently written by a member of the medical profession. Dr. Winslow, or Dr. Winslow's friends, must probably have observed this strange misquotation; but no correction of it has appeared. I trust Dr. Winslow will yet do justice to himself by an ample apology.

In another part of my evidence I suggest that in all cases of disputed lunacy "experts" should be "appointed by the court," and should not appear as "partisans." Upon this also Dr. Winslow is very angry, but he is as usual under a misapprehension as to my meaning. I by no means intended to say that medical men could be "hired" to give evidence one way or the other; I know I could not be myself. My objection was to the system under which, insensibly, a party feeling may take possession of the mind, and the medical witness innocently fall too much into the position of an advocate. I will illustrate this by Dr. Winslow's remarks upon my evidence in the case of Fooks. He says I might "have saved the man's life" by a reply different from the one I gave. I can only say I do not regret my answer. I spoke as medical witness, not as counsel for the defence; and I am sure my answer was, to the best of my knowledge, "the truth, the whole truth, and nothing but the truth." The question put by the Court was, "Did the prisoner at the moment he committed the act know right from wrong?" My answer, after painful thought, was to the effect that "one Being only could tell; the prisoner knows right from wrong now, but was and is certainly insane, and in my opinion irresponsible." This evidence was much commented upon, and, by the medical press, with unanimous commendation. Dr. Winslow suggests another answer, which he thinks would have been more successful; but, in his humane zeal, he unconsciously overlooks my object and mistakes my duty, which was simply to speak the truth under the solemn obligation of my oath.

The unconscious partisanship of medical witnesses engaged under the present system has been often curiously manifested. In the case of Mr. Windham, one of the medical witnesses in support of the case of lunacy was silent—no doubt without dishonest motives—about a letter, written in his presence by the alleged lunatic, which was decidedly material evidence in favour of the opposite theory. Again, at the trial of Townley, in which the question of sudden impulse to murder, and of the knowledge by the prisoner of the difference between right and wrong, was most important to the truth, the leading medical witness for the defence suppressed all mention before the jury of an interesting and extraordinary document, placed in his hands by the prisoner, detailing minutely every word of his two hours' conversation with his victim immediately before he cruelly murdered her. I do not impute venality in this; but I do repeat that the present system of "engaging" medical witnesses is a bad one, and that experts should be appointed by the Crown.

Dr. Winslow insinuates that, although at Derby during the trial, I had no opportunity of arriving at a fair judgment as to Victor Townley's state of mind; and he thus states his reason for this conclusion: "Drs. Seymour and Tuke had to return to town without exchanging one word with the alleged lunatic." This is the truth, but it is the truth of the special pleader. Dr. Winslow suppresses the greater part of the truth, which in its integrity is, that although we had no separate interview with Townley, because the counsel for the defence objected, we were in court during four days, Townley, of course, being present; we were at all the consultations of counsel, copies of the depositions were in our hands, and we heard the whole of the evidence. Our fees for attendance were paid by the Crown.

There are many other points in which it would be easy to expose Dr. Winslow's mistakes; for example, in his remarks upon verdicts of insanity in cases of self-murder. He elaborately tries to prove that mental disorder exists in nearly every case of suicide—a proposition that no one could or did dispute. Dr. Winslow misunderstands my statement, which is to the effect that juries often bring in a verdict of insanity, when there is no other evidence than the suicidal act itself, out of motives of benevolence; and a letter Dr. Winslow has taken the trouble to procure from Dr. Lankester entirely confirms this view. The coroner speaks of juries as "being opposed to the spirit of the law, which inflicts disgrace on the dead and punishment on his relatives;" and that they have therefore a "greater tendency to deliver a verdict of insanity in cases of suicide than of murder." And this is exactly my opinion.

I fear my letter is already too long. I will only, in conclusion, express my astonishment and regret at the style and tone in which Dr. Forbes Winslow has written upon such serious questions. Discussion upon the treatment of the insane, the test of responsibility, the honour and truth of medical witnesses, surely does not offer an occasion for funny stories and humorous quotations; still less should the examination of such questions lead to the exhibition of personal rancour or professional jealousy.

I am, Sir, your obedient servant,

Albemarle-street, April 8th, 1866. HARRINGTON TUKE, M.D.

CONSTITUTIONAL TREATMENT OF LOCAL DISEASES.

To the Editor of THE LANCET.

SIR,—The discovery that lithia, quinine, and many other substances can be traced in the various structures of the body, especially in those regarded as extra-vascular (?), as the crystaline lens, has a very interesting relation to medical surgery, first insisted on, under the name of the "Constitutional Treatment of Local Diseases," by my old and revered master, Abernethy. Since his time the subject, so far as I know, has not been prosecuted in any way worthy of its importance, except, perhaps, by a very few of his pupils, who have, amidst a kind of conventional incredulity, seldom spoken with much authority.

The interesting lecture given last night at the Royal Institution by Dr. Bence Jones induces me to send you a short notice of two cases of cataract, in which the opaque lens became clear under treatment directed to the general health. The first case was that of a man about forty years of age, by occupation a house-painter. As it is some years since, I forget the quantity of rum he had been in the habit of drinking daily, but I know that the quantity must have been enormous by the vibrating condition of his whole muscular system, and by my beginning my attempt to wean him from the habit by allowing a pint daily. He applied to be operated on for cataract; but besides that he was not in a state justifying an operation, his symptoms were complicated with those of amaurosis. I told him that no operation would be of service to him unless he could be relieved from certain symptoms not referable to the cataract. As he seemed determined to do his best, I took him under care, and after some time the symptoms of amaurosis were removed. He was in greatly improved health, and had so entirely relinquished spirit-drinking that he said nothing would again induce him to take any more as long as he lived. On looking at the eyes with a view to the removal of the cataracts by extraction, it appeared to me that the lenses were somewhat less opaque, and on testing the degree of improvement in his vision it seemed to me to exhibit a corresponding shade of improvement. On this I told him he had better persevere in his present treatment, which he did with perfect success, the lenses becoming clear and with the return of distinct vision.

About two years ago I met with a similar case in the wife of a publican, but who was a very temperate woman. In her case the treatment for the correction of the various functions (somewhat too vaguely called the general health) was longer than usual from the same complication—viz., that of amaurotic symptoms with the opacity of the lens; and with the same result—viz., the restoration of the transparency of the lens.

I could give you many examples illustrative of how little is generally done as compared with that which may be accomplished by more enlarged views of medical surgery, but as I hope to publish early next year a digest of the principles which I advocate, and which I shall show to be a more perfect development of those intelligibly deducible from Abernethy, I will not trouble you with more at present, but remain, Sir,

Your obedient servant,

Albany Court-yard, March 24th, 1866. GEORGE MACILWAIN.

THE VACCINATION BILL.

To the Editor of THE LANCET.

SIR,—I have to apologise for troubling you again so soon, but as no time must be lost I think you will excuse me.

I now beg to hand you a copy of a letter addressed to the following members of Parliament on the subject of the "Vaccination Bill," drawing their attention to the inadequacy of the fees proposed; and I am happy to say that I have received favourable replies from the whole.

The letter has been forwarded to Sir Francis Crossley, Bart., M.P.; James Stansfeld, Esq., Jun., M.P.; Henry Edwards, Esq., M.P.; Samuel Waterhouse, Esq., M.P.; and Edward Akroyd, Esq., M.P., to all of whom I am well known.

I trust every Poor-law medical officer, as well as every private practitioner, will communicate *at once* with some member of Parliament, or another injustice will speedily be enacted. Two shillings and sixpence per head have been willingly paid in this district for the vaccination of cattle, and surely human beings, to every sensible mind, are as valuable and require even more attention than the beasts of the field. Some will doubt this, but not the enlightened framers of a "Vaccination Bill,' I should hope.

I am, Sir, your obedient servant,

Cheapside, Halifax, April 7th, 1866. FREDK. S. GARLICK.

[COPY.]

5, Cheapside, Halifax, March 21st, 1866.

DEAR SIR,—A Bill has been introduced into the House of Commons by Mr. Bruce and Mr. Baring, entitled "A Bill to consolidate and amend the Statutes relating to Vaccination in England."

The fee of one shilling and sixpence for the successful vaccination of a child is too little, inasmuch as the child has to be inspected on the eighth day and the necessary certificates filled up. The lowest fee, in my opinion, should be *two shillings and sixpence*.

I have been a public vaccinator now for nearly nineteen years, and therefore I think you will permit me not only to express an opinion, but to hope that you will agree with me that the fee I mention will not be excessive for the time, attention, and skill which are necessary for carrying out vaccination successfully.

I have the honour to be, dear Sir,

Your obedient servant,

FREDK. S. GARLICK.

As a summary, I think the following propositions might safely be submitted to the Right Hon. H. A. Bruce, Vice-President of the Privy Council, with reference to the Bill now before the House of Commons on vaccination.

1. In order that vaccination may be systematically and efficiently carried out, it is only fair to expect that the medical practitioners who discharge the duty should be reasonably and efficiently paid for their services. Unless this is done the Act will, in my opinion, fail, as the preceding Acts have failed; solely because the fees proposed are inadequate. A medical man in ordinary practice does not think it worth his while to vaccinate unless he finds it remunerative, and, to make it so, constant attention must be given to it, without fail, week by week. A supply of lymph must be carefully preserved and constantly at hand, otherwise there will be nothing but delay and disappointment.

2. On this account I think the lowest fee that will prove really remunerative for the time, skill, attention, and responsibility involved, together with the necessary certificates required by the proposed Act, should be two shillings and sixpence for each case residing within a radius of two miles of the medical practitioner's residence, and three shillings and sixpence beyond that distance.

3. That the successful revaccination of any person should be paid for in the same way as primary vaccination, seeing that the trouble and responsibility in both instances are the same.

4. That the necessary certificates required by the Act should be simplified as much as possible, so as to save the medical practitioner's time.

5. That a public prosecutor should be appointed in every district, on whom should devolve the carrying out of the penal clause in the proposed Act. Unless this is done the Act will be constantly evaded, as hitherto, by large numbers. Nothing has a more injurious effect on the public mind than an Act of Parliament, passed it is presumed for the benefit of all, without any provision for its being administered faithfully, energetically, without fear or favour, and in strict accordance with the written word.

CHARTERHOUSE AND ITS REGISTRAR.

To the Editor of THE LANCET.

SIR,—Will you allow me to offer a few words of comment on the incompleteness of the arrangements made on the occasion of the late election to the post of resident medical officer at the Charterhouse, in means not being adopted by the registrar to inform all the candidates *by letter* of the date of the election?

It seems that an advertisement in certain of the daily newspapers was considered sufficient announcement of the event. Did it not occur to the registrar that some of the candidates might possibly, and even probably, never see either of the journals in which the advertisement appeared? That such a contingency *could* and *did* occur, I am, unhappily, able to demonstrate in my own person.

Being a candidate for the office resigned by Dr. Miles, I sent in an application and twenty original testimonials (including five specially given me for the occasion) to the registrar of Charterhouse as long ago as January 29th, having on the 13th of the same month forwarded printed copies of testimonials, accompanied by an autograph letter, to each governor. Not receiving any communication from the Charterhouse authorities, I concluded that a certain number only of the candidates had been selected from those applying, and that I was not placed among the favoured few from whom the final selection would be made by the governors; I therefore gave no further heed to the matter.

Judge then, Sir, of my surprise when I was informed, a week after the election had come off, that seventeen of the candidates (i.e. all except myself) attended at the Charterhouse on the 14th inst., and further, that my name was called in due order with those of other candidates.

The sole reason of my absence from the meeting on the day of election was my ignorance of the particular date fixed for the event to be decided. I did not see any of the daily newspapers on the 9th and 10th inst., on one of which days, I am informed, the announcement of the meeting was advertised; and no advertisement appeared in THE LANCET, the more legitimate channel of information in medical circles. The most satisfactory method of proceeding, however, would have been for the registrar to have sent a separate notice of attendance to each candidate. Had such a course been adopted the *contretemps* that I have now to deplore would not have occurred, as I could most readily have attended on the day that happened to be chosen for the election. I feel the disappointment of not having had the opportunity afforded me of a personal interview with the governors (two-thirds of whom had previously received recommendatory letters on my behalf) quite as much as the unsuccessful issue of my application for the vacant post, which latter I desired chiefly on account of the daily association with scholars and gentlemen its tenure would have involved.

Trusting that the remarks I have ventured to make through your columns may be of some use, if but little, in the ordering of future elections, whether of medical or other officers, at the Charterhouse,

I remain, Sir, yours very respectfully,

St. Martin's-le-Grand, March, 1866. EDMUND LLOYD.

THE LLANGEFNI CASE.

To the Editor of THE LANCET.

SIR,—Being concerned in the above case, and having seen my name introduced in the last number of THE LANCET, I deem it but right to the profession to state what my evidence was at the adjourned inquest, and that briefly. On the 13th ult. I went, in company with Mr. Williams, an old gentleman of considerable experience in midwifery, to the house of the young woman supposed to have given birth to a child a few days before; in the presence of the mother and Mr. Williams I made a hand and eye examination of a young woman of *light complexion*. I first examined the vagina. I had an easy access to the mouth of the uterus; it was perfectly soft and smooth, the os uteri dilating freely on the introduction of the index finger, so much so that I could have introduced more. There was a discharge of lochia, and the upper surface of her chemise was stained with the same. The breasts were distended with milk; the nipples of dark colour, such as we invariably find in parturient women. Mr. Williams extracted milk from the left breast, and myself from the right; there was abundance of it. With all the detailed symptoms, I gave my opinion at the coroner's court that she had been recently delivered.

I saw her on the 19th, and in my opinion she was suffering from milk fever. I examined her breasts, and the slightest manipulation caused the milk to flow freely, thus confirming the opinion I gave at the coroner's inquest.

I am, Sir, your obedient servant,

RICHARD THOMAS.

Westbury Mount, Menai Bridge, April 10th, 1866.

THE Empress of the French lately went over and inspected the establishment for convalescents at Vincennes, founded by the Emperor, which luxuriously accommodates 500 invalids. The Empress directed MM. Perdonnat, Beboul, and Margantin to organize a series of lectures to be delivered for the instruction and entertainment of the convalescents.

Parliamentary Intelligence.

HOUSE OF COMMONS.

APRIL 9TH.

THE PROMOTION OF ASSISTANT-SURGEONS IN THE GUARDS.

The Marquis of HARTINGTON said, in reply to Mr. O'Beirne, that up to the time of the warrant in 1858 the system of promotion in the Guards was, no doubt, a regimental system; but in that year a warrant was issued which conferred several advantages, as to pay and rank, on the medical department, and that warrant also recommended that the mode of promotion, as a general rule, for the rank of assistant-surgeons should in future be by seniority in the service. In 1860 the question arose in regard to the surgeons of the household cavalry, whether the provisions of the warrant would apply to that branch of the service, and it was decided by her Majesty, on the recommendation of the Commander-in-Chief to the Secretary of State for War, that in the household cavalry and in the Guards also, in consideration of the surgeons having accepted the warrant, they should enjoy the advantages it conferred upon them.

THE CATTLE PLAGUE ACT.

Sir G. GREY said, in reply to Mr. C. Read, the provisions of this Act had been merely temporary, but an order in council had been passed to continue those provisions with regard to the slaughtering of animals and the payment of compensation to the 10th of May.

CONTAGIOUS DISEASES BILL.

On the motion of Lord C. PAGET, the following members were nominated the select committee on this Bill:—Lord Clarence Paget, Sir John Pakington, Mr. Walpole, Mr. Hunt, Lord Hotham, Sir James Fergusson, General Peel, Sir Harry Verney, Admiral Erskine, Sir Morton Peto, Mr. Ayrton, Mr. Kinnaird, Mr. Locke, Marquis of Hartington, Sir George Grey, Colonel Herbert, and Mr. Morley.

APRIL 10TH.

MORTALITY OF TROOPS IN CHINA.

On the motion of Colonel NORTH, the following gentlemen were appointed a select committee on the mortality of troops in China:—Colonel North, the Marquis of Hartington, Lord Hotham, Mr. Baxter, Mr. Adderley, Lord F. Cavendish, Mr. Roebuck, Colonel P. Herbert, Mr. Dalglish, Lord H. Percy, Mr. Calthorpe, Major Anson, Lord J. Hay, Mr. Trevelyan, and Major O'Reilly.

PROMOTION OF SURGEONS IN THE GUARDS.

Sir R. ANSTRUTHER gave notice that on the 16th of May he should call the attention of the House to the proposed alterations in the system of promotion amongst the medical officers in the brigade of Guards, and that he should move for a copy of the Warrant or Order of 1860, under which the alteration was made.

APRIL 11TH.

The Cattle Contagious Diseases Bill and the Labouring Classes Dwellings Bill were read a third time and passed.

VACCINATION BILL.

Mr. H. BRUCE, in moving that the House should go into committee on this Bill, explained that its object was the consolidation of the existing Acts relating to vaccination, and the introduction of certain amendments in the law for the purpose of establishing an efficient system of vaccination throughout the country.

Mr. HENLEY and Sir R. PEEL having pointed out the numerous defects in the Bill,

Mr. H. LEWIS said the defects were too many and serious to be dealt with in committee of the whole House, and moved that it be referred to a select committee.

This was seconded by Sir J. JERVOISE, and supported by Lord Henley, Mr. Hibbert, Mr. Barrow, Mr. Ayrton, Colonel North, Sir R. Peel, and others.

Mr. BRUCE consented to refer the Bill to a select committee, but upon the express understanding that the committee were not to interfere with the principle of the measure, which was the establishment of a compulsory and efficient system of vaccination.

The Bill was then ordered to be referred to a select committee accordingly.

DEATHS OF DR. BABINGTON AND DR. HODGKIN.

THE deaths of two physicians of note have occurred within the last few days. Dr. Babington and Dr. Thomas Hodgkin are no more. Both were for a long period colleagues at Guy's Hospital, though Dr. Hodgkin retired from that institution many years since. An obituary of each will appear in our next number.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 10th inst., and when eligible will be admitted to the pass examination:—

J. L. Mossley, A. H. Baines, C. J. Sells, F. S. Daldy, Charles Munden, J. G. Carruthers, W. B. Lewis, C. J. Worts, George Stokell, W. J. Bennett, J. W. Barry, William Kipling, John Lloyd, J. J. Bingham, William Price, David Havard, C. H. Joubert de la Ferte, Inman Welsh, Friend Lewin, T. A. Roberts, R. C. Sanders, W. H. Canston, George Salt, W. J. Barkas, T. O. Wood, J. T. Parkinson, W. A. Cox, Edward Jackson, T. W. Lee, H. L. Snow, William Dobson.

The following passed their examination on the 11th inst.:—

Edward Hewer, R. M. Bradford, J. T. Williams, C. B. Crowfoot, N. H. Jarvis, George Andrews, Richard Rendle, R. L. Wilson, J. G. Wiseman, J. B. Saundry, Frederick Taylor, Edward Sunderland, A. H. Buck, Adam Wilkinson, William Powell, Edward Stephens, William Younghusband, J. R. Haynes, C. C. Winckworth, H. E. Hetling, T. D. Saunders, George Thompson, F. W. Wimberley, John Bately, Clement Dukes.

The following passed on the 12th inst.:—

William Roche, John Curnow, A. F. M'Gill, Daniel King, Wm. Webster, W. B. Kendall, John de Liefde, T. W. Joy, F. W. Salzmann, Branford Edwards, R. M. Cole, Charles Higgens, J. A. Lormier, Alex. M'Gregor, John Gosse, D. H. B. Anderson, John Giles, William Anderson, N. C. Dobson, John Fairbank, Alfred Hollis, J. J. Swindell, Walter Maine, J. G. Black, B. P. B. Burroughs, Anthony Foster, Evan Williams.

It is stated that of the 108 candidates who offered themselves for examination, 5 were rejected on the first day, 8 on the second day, and 9 on the last.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 5th inst.:—

Macgowan, Alexander Thorburn, Caversham-road, N.W.
Pratt, William Thomas Cassell, Newport, Monmouthshire.

The following gentlemen also on the same day passed their first examination:—

Barroll, George William, St. George's Hospital.
Bately, John, Sydenham College, Birmingham.

MR. HERMANN OTTO POST, lately deceased, has left a legacy of £100 to the German Hospital.

THE actual number of paupers in England and Wales, in January last, was upwards of 900,000.

THE rinderpest has not appeared in America, though it has been reported to have done so.

A YOUNG man died of hydrophobia in the neighbourhood of Manchester, after two days' illness, on Wednesday last. He was bitten in the leg by a bull-terrier in August last.

AT the London Quarter Sessions, on Saturday, a report of a committee was adopted, increasing the salary of the city coroner to £885 a year.

A false report has been spread that trichiniasis had appeared in Chicago; the object being to favour speculation in the meat trade.

THE Hospital of St. John and St. Elizabeth, Great Ormond-street, which was founded in 1856, has just been closed by the unanimous resolution of the committee.

THE Duke of Cambridge will preside at the annual festival of the University College Hospital on the 18th inst. at Willis's Rooms.

MR. PEALE, of Maidstone, has offered to the Town Council of that borough £1000 to purchase a healthier site for the Grammar School.

THE munificent sum of £6000 has been presented by Mr. Peter Pantia Ralli, through Dr. Priestley, for the purpose of establishing a ward for poor sick children in King's College Hospital.

THE old College of Physicians in Warwick-lane, which was built by Sir Christopher Wren, is to be pulled down in a few days.

THE Emperor has granted a sum of 80,000 francs from his privy purse to aid the Trappist Fathers in the important works they have undertaken for cleaning the panels of Las Dombes, in the Ain.

THE cattle-plague returns for last week show a total decrease during the week ending March 24, 1866, in England, Wales, and Scotland, of 1557 cases, as compared with the week ending March 17.

THE cholera has been raging at Diekirch for some days past with unusual violence. After carrying off numerous victims among the working class, it is now choosing its prey among the wealthier inhabitants.

MR. H. EDWARDS, surgeon to the Cardiff Workhouse, has been charged with manslaughter; two men having died after taking some medicine for which they had applied to the workhouse surgery.

DR. HILLIER, in his report to the vestry of St. Pancras, stated that only one fatal case of small-pox had occurred in the parish, but that ten cases were under the care of parochial surgeons. The Small-pox Hospital is quite full.

THE Emperor of the French, at the suggestion of the Minister of Agriculture, has granted 300 medals—10 in gold, 178 in silver, and 112 in bronze—to those of the medical profession who, during the late visitation of cholera, evinced zeal and devotedness in the care of the sick.

THE gross income of Christ's Hospital for 1865 amounted to £71,855 11*s.* 10*d.* Of this the medical officers of London and Hertford received £745. The average number of boys maintained and educated in the London and Hertford establishments was 1205.

ACCORDING to a report prepared by Dr. Percy since the session began it is stated that the system of ventilation adopted in the Houses of Parliament is that of exhaustion, the air being put in motion by means of heat, applied by coke fires in great upcast shafts, the chief two being in the Victoria Tower and the Clock Tower.

THE Constantinople Cholera Conference have agreed upon a plan of procedure. It groups the questions to be considered into four classes: 1, The nature and origin of cholera; 2, Its transmissibility; 3, The measures of prevention against it; and 4, The form to be given to the resolutions of the conference.

SHOCKING ACCIDENT.—On Saturday last a frightful accident occurred on the Rottingdean Cliffs, near Brighton, to a gentleman named William Willett. During the afternoon the unfortunate gentleman left his residence, accompanied by his son Charles, a surgeon, both being on horseback. They had proceeded some distance along the green sward surrounding those lofty and well-known cliffs, and were returning towards Brighton, when the horse which Mr. William Willett was riding shied, and, swerving towards the edge of the cliff, was precipitated with its rider on to the beach below, falling from a height of about sixty feet. Both horse and rider were killed. Some years since Mr. Willett's father met with an accident on exactly the same spot, from his horses taking fright. He received a wound in his hand, which mortified and caused his death.

THE PRITCHARD POISONING CASE.—On Friday Dr. Paterson, who acquired a certain degree of notoriety in connexion with the Pritchard case, obtained a verdict for one farthing of damages in an action brought by him against the proprietor of the Glasgow *Morning Journal*. The ground of action was an anonymous communication from a friend of Dr. Pritchard, inserted in the newspaper when Pritchard was first apprehended, and claiming for the accused a suspension of judgment on the part of the public. The writer animadverted on the anonymous letter to the Procurator-Fiscal, by which the suspicion of the authorities had first been directed against Pritchard, as being the work of a "moral coward," "who had hazarded a stab in the dark;" and the question submitted to the jury was, whether the communication represented Dr. Paterson as the writer of that letter, and contained injurious imputations on his character.—*Scotsman.*

MEDICAL VACANCIES.

Infirmary for Consumption, Margaret-street—Visiting Physician.
Isle of Man Hospital and Dispensary—Resident Medical Officer, vice Mr. E. Snell, resigned.
Borough of Leeds—Sanitary Inspector.
Stockport Infirmary—Assistant House-Surgeon.
West London Hospital—House-Surgeon.
Wivelscombe Dispensary—Medical Officer.
Worcester Dispensary—Resident Medical Officer.

MEDICAL APPOINTMENTS.

Mr. J. O. ADAMS has been elected Medical Officer for District No. 3 of the Plymouth Incorporation of the Poor, and one of the Public Vaccinators of the St. Andrew's District, vice J. H. Hicks, M.R.C.S.E., resigned.

T. CURRIE, L.R.C.S., L.R.C.P.Ed., has been appointed by the Lords Commissioner of the Admiralty, Surgeon to H.M.'s Seamen and Coast Guard—Boulmer, Alnmouth, Amble, Hauxley, and Cresswell Detachments, vice Dr. Duncan, deceased; also Public Vaccinator for the Warkworth District of the Alnwick Union, Northumberland.

J. ELLERTON, M.D., has been appointed Surgeon to the North Riding Infirmary, Middlesborough-on-Tees.

J. GODFREY, L.R.C.S.Ed., has been elected Assistant Medical Officer to the Barnhill Poorhouse, Glasgow, vice J. Taylor, M.D., deceased.

R. T. GRUBB, M.R.C.S., has been appointed House-Surgeon to St. Mark's Hospital.

S. HAYWARD, M.D., M.R.C.S., has been appointed Honorary Medical Officer to the Royal Pimlico Dispensary and Lying-in Charity, vice J. Brighouse, M.R.C.S.E., resigned.

WM. HICKMAN, M.B., has been appointed Surgeon for Out-Patients to the Samaritan Free Hospital for Women and Children, Edwards-street, Portman-square.

F. E. JUNKER, M.D., has been appointed a Physician for Out-Patients to the Samaritan Free Hospital for Women and Children.

P. Q. KARKEEK, M.R.C.S.E., has been appointed House-Surgeon to the General Infirmary, Chester.

T. S. MURRAY, L.K.Q.C.P.I., Medical Officer for the Manorhamilton Dispensary District, has been elected Medical Officer for the Tobercurry Dispensary District of the Tobercurry Union, Co. Sligo, vice J. M. M'Carthy, M.D., deceased.

W. B. MUSHET, M.B., M.R.C.P., has been appointed Physician to the North London Consumption Hospital, vice Dr. Macgowan, resigned.

J. H. QUIN, M.R.C.S.E., from the Leeds Public Dispensary, has been appointed House-Surgeon and Apothecary to the Lincoln General Dispensary, vice C. C. Clayworth, L.R.C.P.Ed., appointed House-Surgeon to the London Hospital.

W. R. ROGERS, M.D., has been appointed Physician for In-Patients to the Samaritan Free Hospital for Women and Children.

J. TAYLOR, M.R.C.S.E., has been appointed Assistant House-Surgeon to the General Infirmary, Chester.

A. W. WILLIAMS, M.D., has been appointed a Physician for Out-Patients to the Samaritan Free Hospital for Women and Children.

Births, Marriages, and Deaths.

BIRTHS.

On the 28th ult., at Constitution-street, Aberdeen, the wife of Dr. M'Quibban, of a daughter.
On the 31st ult., at Elgin-road, Kensington-park-gardens, the wife of J. Fitzpatrick, M.D., retired Surg.-Major Madras Army, of a son.
On the 2nd inst., at Blairgowrie, Perthshire, the wife of J. Neilson, M.D., of a son.
On the 2nd inst., at Merrion-square North, Dublin, the wife of S. G. Wilmot, M.D., of a daughter.
On the 2nd inst., at Princes-street, Edinburgh, the wife of Assist.-Surgeon Hunter Adam, Madras Army, of a daughter.
On the 5th inst., at Accrington, Lancashire, the wife of W. S. Russell, M.R.C.S.E., of a son.
On the 5th inst., at Chaddesley-Corbett, near Kidderminster, Worcestershire, the wife of F. Fitch, M.D., of a son.

MARRIAGES.

On the 3rd inst., at Blackpool, Wm. Lawson, Surgeon, of Brierfield, near Burnley, to Anne, daughter of J. Brooks, Esq.
On the 4th inst., at Coventry, Carey Pearce Coombs, M.B., of Bockington, Somersetshire, to Mary Leslie, daughter of W. Franklin, Esq.
On the 4th inst., at All Saints', West Ham, Thomas Drake, Esq., of Stratford, to May, daughter of Wm. Elliot, M.D., of Stratford, Essex.—No Cards.

DEATHS.

On the 10th of Feb., at Nynee-Tall, North-Western Provinces, India, J. D. Wylie, M.D., Civil Surgeon at that Station.
On the 27th ult., at Castlewellan, James Crothers, Surgeon, aged 75.
On the 31st of March, J. Glass, L.F.P. & S. Glas., of Kent-street, Glasgow.
On the 31st ult., F. X. Moseley, M.D., of Seymour-street, aged 61.
On the 3rd inst., E. S. Clarke, M.D., of Richmond-hill, Rathmines, Co. Dublin.
On the 3rd inst., J. P. Mackesy, M.B., F.R.C.S.I., of Waterford, aged 50.
On the 4th inst., Wm. Dunn, M.R.C.S.E., of Wolverhampton, aged 62.
On the 5th inst., at Belhaven, Dunbar, M. Turnbull, L.R.C.S.Ed., formerly of Coldstream, and late Surgeon to the Haddington &c. Militia Artillery, aged 74.
On the 5th inst., E. Milner, M.D., of Argyle-street, Glasgow, formerly of Leith, aged 44.
On the 7th inst., R. M. Galindo, M.D., of Noel-street, Islington, aged 72.
On the 7th inst., Caroline Edith, youngest daughter of A. B. Steele, M.R.C.S.E., of Liverpool, aged 2 years.

To Correspondents.

THE WORKHOUSE INFIRMARIES OF ST. MARGARET AND ST. JOHN, WESTMINSTER.

Two or three slight inaccuracies which have crept into the report of our Commissioners on the Workhouse Infirmaries of St. Margaret and St. John, Westminster, must be corrected. We are informed that it is not by the guardians, but by the police magistrate, that the late Surgeon of the Kensington Workhouse of Westminster is employed to certify for the parish lunatics; but the *tacit* consent of the Board is, of course, implied in the continuance of this arrangement. The oakum-shed was stated, by a clerical error, to contain 75 cubic feet for each "sleeper." It should have been each "worker." It was the oakum-"room," not "shed," which at the time of our inquiries was employed as a sleeping apartment for inmates. The two rooms are distinct.

M.D. Lond. will find the circumstance described in the "Ath. Ox. Fasti," vol. ii., p. 25, where it is stated that at the funeral of Dr. Richard Bartlet, the President and others of the College of Physicians of London attended; it being the first time that the statute book of the College, adorned with silver, was carried before the President.

Dr. Thos. Dalton's communication shall appear in an early number.

ON THE ADMINISTRATION OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—Having read the account of Dr. Gillespie's case of "Death by Chloroform," recorded in THE LANCET of 6th January last, I beg to contribute a somewhat similar case, excepting that the woman fortunately recovered. My friend Mr. W. and (I think) Mr. G. were present, both surgeons. It was a case of femoral hernia, apparently strangulated, and the poor woman suffered excruciating pain. She was in the recumbent posture, her head being slightly bent forwards, happening to be placed on two pillows and a bolster. She wore a cap, which was tied beneath the chin, and I carelessly neglected to untie it. After a *single whiff* of chloroform, very carefully administered, she became deadly pale, respiration apparently ceased, the pulse was imperceptible, and we thought her gone beyond recovery! I immediately snatched away the pillows and bolster from beneath her head, and untied her cap. We sprinkled cold water over her face, which soon resumed its natural colour, and she came round. The window was thrown open, and brandy administered to her. She seemed to be quite under the influence of chloroform. It was cautiously continued, and we were delighted to be able to reduce the hernia with the chloroform, all other means having failed.

Some time afterwards the same thing occurred to this woman. Mr. W. was again good enough to assist me. Our previous experience guided us in administering the chloroform. We found one or two whiffs quite sufficient for her. She seemed to be put into the third stage of chloroformism at once; but we managed to reduce the hernia this time without any alarming appearances.

I have witnessed chloroform administered by elderly surgeons to young persons in the sitting posture soon after meals, luckily without any ill effect, except vomiting after frequent and difficult attempts to do so. It appeared to me that the recti muscles of the abdomen were paralysed, because firm pressure of the surgeon's hand over the pit of the stomach enabled the patient to complete successfully the attempt to vomit. So that chloroform is itself an emetic under such circumstances. But the person's face and head seem gorged with blood; froth appears from the mouth, and the symptoms look more frightful than I imagine dangerous in reality.

I may mention incidentally that I consider my inhaler the best for the purpose. It is simply a silk handkerchief, shaped like a filter, lined towards the apex inside and out with india-rubber waterproof, something like oil-silk in appearance. This prevents evaporation and escape. Over it is sewn a piece of thick brown paper, also inside and out, so as to cover the waterproof. Inside at the apex there is a small piece of sponge to collect the chloroform dropped on to it when required. I generally use about a drachm at a gulp; but am decidedly of opinion that the exact quantity is of little importance as compared with the method of administering it, which should be done by slow degrees, approaching the handkerchief closer and closer to the nose and mouth, or removing it further and further away from it, according as it may be deemed proper. By means of the handkerchief prepared as above directed, I beg leave also to state that the chloroform can at the pleasure of the administrator be prevented from escaping, and always by opening a window the percentage in the surrounding atmospheric medium can be limited. I have never found any difficulty whatever.

In Dr. Gillespie's case, is it not possible some blood might have quietly trickled down through the larynx into some of the air-tubes, and so caused death somewhat after the manner graphically explained by Dr. Watson in his Lectures? Or why is it that the administration of chloroform for the purpose of extracting teeth without pain is found practically to be so frequently dangerous? My idea is, that since the discovery of chloroform many persons are indebted to it for their lives, who otherwise would long since have perished.

I am, Sir, your obedient servant,
March, 1866. S. W. S.

W. J. B. should place himself in confidential communication with the Secretary of the College; or he might obtain a declaration made before a magistrate by his father, if living, or the mother, stating the date of his birth, and take it with him, when no doubt it would be accepted.

Nemo.—The whole subject is under consideration. We doubt, however, how far our correspondent's views will coincide with our own perfected judgment.

PREPARATION OF CHLORODYNE.

To the Editor of THE LANCET.

SIR,—Would any of your correspondents inform me how and when, in making chlorodyne, the chloroform ought to be mixed? An answer would oblige.

I am, Sir, yours obediently,
April, 1866. A JUNIOR PRACTITIONER.

MINERAL WATERS OF VALS (ARDECHE).

WE have had the opportunity of examining, tasting, and applying in practice some water from one of the springs in the above source. The particular specimen which fell under our notice was from the spring named Magdeleine; but there are five others, St. Jean, Précieuse, Désirée, Rigolette, and Dominique, derived from the same locality. The last named differs completely from the others. It contains 1·33 parts of free sulphuric acid to the litre, with a very appreciable quantity of arsenic in combination with iron. It is said to have been found useful in intermittent fever, as well as in scrofulous, syphilitic, and skin affections. From its composition it would seem well deserving of trial in such disorders. The other springs differ amongst themselves in the proportion of contained salts; but they agree in the presence of free carbonic acid, bicarbonate of soda, potash, lime, magnesia, iron, chloride and sulphate of soda and lime, and silicate of alumina. Their properties are therefore akin to those of the Vichy sources. The amount, however, of free carbonic acid and of iron is larger than in the last named. Contrasting the Magdeleine of Vals with the Célestins of Vichy—each, in general terms, the strongest and most useful of its kind,—we find the former more effervescent, containing about double the quantity of carbonic acid, and therefore more agreeable to the taste. But it is especially in the nature and proportion of the mineral ingredients that the Vals claims the superiority, more particularly in those limited quantities to which various considerations (including economical ones) restrict the use of such mineral waters when imported into places far from their source. The bicarbonates of the alkalies and alkaline earths far exceed those of the Célestins, rising to 1 and 1½ for the soda base, 7 for the potash, 1½ for the lime, 3 for the magnesia. The chloride of sodium of the Vals is only from ½ to ¾ of the Vichy water. The ferruginous constituent of the Vals is stated at 7 times that of the Vichy. To sum up, the Magdeleine appears greatly to surpass the Célestins in the quantity and quality of its alkaline and alterative ingredients, and claims a far greater tonic power. The Vals waters may be obtained of Messrs. E. Gallais and Co., Margaret-street, Regent-street.

Dr. Cornelius B. Fox's (Scarborough) paper "On the Sympathy between the Auditory Canal and the Larynx" shall appear next week.

A. B.—The puffing tract on the "Cattle Plague" is beneath notice.

Medicus, (Oldham.)—Yes. Write to the Secretary of the Medical Council, Soho-square.

BLEEDING IN APOPLEXY.

To the Editor of THE LANCET.

SIR,—For the benefit of the rising generation of surgeons, let me ask you whether you intend it to be understood that you agree with M. Trousseau that we should refrain from bleeding in all cases of apoplexy? Twenty years ago, when that distinguished physician had given up this treatment, I was called in the middle of the night to the large hotel close to my house, and found a fine stout old gentlemen on his back in bed, perfectly insensible, with well-marked stertorous breathing, puffing cheeks, dark countenance, &c. Being then troubled with no thoughts of white softening or "restorative treatment," the patient's garter was round his arm in about half a minute, and a pint of his blood in the *pot de chambre* in less than five minutes, and before that time he had begun to move. Indeed we had quite a little conversation before the bandage was taken off the vein and reapplied to stop the flow of blood. I found that my patient was Dr. Jeffrey, of Liverpool, not unknown to me as the introducer of matico into England. He gave me afterwards a very lucid description of the premonitory symptoms he had felt, such as numbness in one foot, vertigo, &c. He recovered at once, and perfectly.

Surely here was a condition of brain which would have resulted in hæmorrhage but for prompt bleeding.

Ten years ago a man of about the same age came to me, with slight loss of power of motion of the left side. On full investigation, I diagnosed white softening at the base of the brain at the right side—say corpus striatum, with slight bleeding. I bled him, hoping to stop further hæmorrhage. He was of full habit. The hemiplegia increased gradually until he lost the side entirely, and soon symptoms of pressure on the hemispheres also came on, and he died comatose.

Here I had an opportunity of testing the truth of my diagnosis by a post-mortem, which revealed, as might be supposed, white softening of right corpus striatum, and a clot, which, beginning there, had gradually ploughed up the brain-substance until the hemispheres were subject to fatal pressure.

Surely such cases as these show that bleeding may prevent hæmorrhage in the brain, but can scarcely stop it when it has once occurred, and that the practitioner is not justified in refraining from bleeding "in all cases of apoplexy." Let him rather carefully discriminate, and by no means neglect to do it when there is a possibility of preventing threatened rupture of a vessel in the brain.

I am, Sir, yours truly,

Windermere, March, 1866. FREDERIC CLOWES.

*** Our correspondent's interesting cases do not go far to prove the utility of large bleedings in cases such as those under discussion. In his first case there was possibly some mechanical relief from the loss of blood; but a more detailed history of the patient, both before and after, would be necessary to judge of the nature of the attack and of the amount of credit due to the bleeding. The second case goes to show much more clearly the uselessness of bleeding than the first proves its advantage. Bleeding was practised early when the hemiplegia was but slight (the patient's consciousness unaffected?), when *there was probably no hæmorrhage;* and yet, despite this treatment, internal hæmorrhage went on, if it did not come on, to the production of fatal coma. If bleeding avails to avert hæmorrhage, it should also avail to arrest it. It seems to have done neither in the second case. Perhaps it did not do the former service in the first case. We must not yet answer dogmatically our correspondent's important query; but science and practice alike support us in an infrequent and sparing employment of bloodletting.—ED. L.

SMALL-POX AMONGST CATTLE IN INDIA.

WE are obliged to our correspondent for his letters on this subject. The disease he describes seems to be a veritable exanthem, probably of the nature of small-pox, "the whole surface of the animal being covered with postules." We shall be further obliged to him for information as to the results of his experiments on the degree of protection conferred on animals by vaccination and inoculation respectively. His letters leave this important point unsettled. Before this reaches him he will have learned that our present cattle plague, though possibly a form or modification of small-pox, is so far different from human small-pox as that vaccination does not confer protection from the disease. The malady he describes seems different from ours, especially in the amount of eruption, and the result of exposing vaccinated and inoculated animals to it may be different from the result we have obtained. We sincerely hope it may be so, and shall be only too glad to publish the fact. Meantime we think it better not to publish his letters, as they leave this vital question unsettled.

Dr. A. Thompson.—There was a great controversy in 1571 between the physicians and surgeons concerning the propriety of the latter administering internal remedies.

Dr. Somerville shall receive a private note.

Justus.—Submit the whole case and correspondence to the judgment of a "Court-Medical."

NAVAL INVALIDING.

To the Editor of THE LANCET.

SIR,—With regard to the treatment of phthisis, we are all aware that difference of opinion has ever existed. I wish, however, to ask the profession in general if their approbation is to be granted to the following, one of many cases which monthly come under my notice. I enclose an extract from one of the forms of naval invaliding, the subject of which was given to my charge this day. He was in hospital in Jamaica but twenty-four hours:—

Extract.—"When admitted he was in the last stage of phthisis, and too ill to admit of a prolonged examination."

To me this appears to mean that "he is so ill that he will not bear inspection, and so we will send him away that he may not die under our charge." Now, in all probability, had this poor boy been left at that beautiful island of Jamaica, where any conceivable climate can be attained, although he certainly must have died eventually, he would have had a better chance of a little longer time than he now has in being sent from warmth and sunshine to the very worst climate in the world for consumptive patients—viz., England in February.

Although this patient was brought on board the Royal mail steamer *Solent* in a cot, I may add that a bed-sore as large as the palm of my hand over the sacrum was left totally unprotected from the injurious influence of the dye (indigo) of a pair of seaman's flannel trousers.

On the same day I received from H.M.S. —— the following case, which I should be glad to have explained to me:—

G. D——, ordinary seaman (15th January). "Admitted on sick list on January 8th. A week ill, complaining of debility and languor, loss of appetite, and night-sweats; no cough or active disease of chest apparent; pulse small and weak. States that he has lost flesh, and has been taking iron and quinine without benefit. Invalided in February."

Now, although in this case several symptoms of non-disease are mentioned to me, only one of disease, and that a secondary one, can I make out, and the man now is as well as any one of our own crew.

A case also of the same date is that of J. B——, aged seventeen, who is reported "born of consumptive parents, and to have been suffering for several months from cough; and in December last, whilst quietly standing at the gangway, had an attack of hæmoptysis. Since then he has twice had similar ones, on the last occasion very severe. There are signs of tubercle in both lungs."

He is also sent to England in mid-winter.

In another case I am informed that the specific gravity of my patient's urine "varies from 1·10 to 1025." This I must think rather careless.

Did I wish to bore you and your readers, I could give you scores of similar instances in which patients are sent on board those ships to save the naval surgeons their deaths. Now, how we, the surgeons of the various large Royal mail services, can possibly do justice to the invalids committed to our charge with the slender diagnosis we receive I cannot make out, or either what good we can do to the consumptive patients sent to England by our vessels in winter.

Your obedient servant,

M. J. MILTON, M.R.C.S.,
R.M.S. *Solent*, Jamaica, Feb. 9th, 1866. Surgeon R.M.S.P.Co.

E. J. H.—The notice had reference to the diploma of the College of Physicians, Edinburgh. It is applicable, however, to the licence of the College of Physicians of London. By reference to the Students' Number of THE LANCET, our correspondent will obtain all the information he requires.

J. M.—Such advertisements are not strictly professional, and it is better not to publish them.

M.D., (Chertsey.)—The matter shall be inquired into previously to any remarks being made upon it.

Di Legno.—We do not find the name of the writer in the Medical Directory or the Register.

W. W. asks where he can obtain soap made with thirty per cent. of glycerine?

THE VACCINATION ACT.

To the Editor of THE LANCET.

SIR,—It appears to me that the Vaccination Act and the new Bill are a complete robbery from the pocket of the private practitioner, as they take vaccination entirely out of his hands, and place it in those of the public vaccinators. Why not do away with this monopoly by the new Bill, and allow all medical men to vaccinate at the expense of the State for half a crown? There will then be no occasion for contracts, and each practitioner will be able to vaccinate his own patients, instead of being continually told they will go to the person who will do it for nothing.—Yours, &c.,

April, 1866. A. B.

Middlesborough-on-Tees.—Taking into consideration all the circumstances of the case, Mr. Husband was perfectly justified in the course which he pursued. He was bound to give a certificate of the cause of death consonant with the evidence which was afforded him. If Mr. Simpson were unqualified with respect to the possession of a diploma or licence to practise, it must be borne in mind that he had been engaged in the treatment of ordinary cases of disease for several years, and had been duly articled. Moreover, he retired from the treatment of the case in question on Monday, and no further surgical aid was sought until the Thursday following. Under these circumstances, no jury would have been justified in finding Mr. Simpson guilty of manslaughter. The case is a painful one in many respects, and nothing can excuse the reported harshness of Mr. Simpson to the patient. The question relative to the employment of "unqualified" assistants is one of much difficulty. Undoubtedly, upon principle, no unqualified man should practise. The present system of employing assistants without "qualification" has been the result of the anomalous position in which members of the profession have been placed by the inefficiency and absurdity of the laws which relate to them, by the insufficient remuneration which Poor-law surgeons and others receive, and by various other causes. It is undoubtedly much to be desired that none but duly qualified assistants should practise in any way; but we do not see, under present circumstances, how such a rule could be enforced.

Dr. R.—The Mace belonging to the College of Surgeons was a present to the institution from George IV. The "Gilded Bauble" of Oliver Cromwell is stated to be in the possession of the Royal Society.

Lex.—B. is right. The salary being paid weekly, a week's notice is sufficient.

THE INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—One of the greatest drawbacks to service in the Indian army is the jealousy displayed by all ranks, from a Commander-in-Chief downwards, and which practically serves to defeat every measure of Government calculated to ensure the medical officer a proper position, and to render the service popular. The following is a characteristic example:—

For nearly ten years past a surgeon-major has ranked with a lieutenant-colonel, though the fact has been so studiously kept in the background that nine officers of a regiment out of ten are to this day unaware of it. But the Madras Government have lately hit upon a notable device for the more complete concealment, not only of the relative rank, but of the very title itself. This is effected by including all surgeon-majors and surgeons in one common list, headed "Surgeons!" (See the last two Madras Army Lists, published quarterly.)

Now, it must be remembered that a surgeon-major's is not brevet or honorary, but *substantive* rank in its fullest acceptation. To include him, therefore, in a list headed "Surgeons" is equivalent to including a substantive lieutenant-colonel in a list headed "Captains."

In the American army the medical officer is styled captain-major, and so forth up to general, according to his rank; and after many years' attentive consideration of our own system, I have come to the conclusion that there is in truth no other mode of *ensuring* to him a recognition of his real position; nor have I ever heard a single serious argument against it, excepting in the shape of those common-place and vulgar objections with which every proposal that savours of novelty is inevitably assailed.

"It would seem so strange," says Miles, "to call a doctor captain or major." True, gallant Sir, and very strange beards were deemed a few years since, and yet they are common and familiar enough now.

Seriously, if Government desire an effectual and inexpensive mode of rendering popular the army medical services, I believe they cannot do better than follow the example of our practical and business-like neighbours. At least it would be worth while to communicate with the American Government with a view to ascertain how far *their* plan has been found to answer.

I remain, Sir, yours faithfully,

February, 1866. LIBRA.

A Weekly Reader, (Birkenhead.)—a. Yes.—b. He could hold any of these appointments if there were no *special* exceptions in the regulations of the service which he entered.

W. S.—a may find the series in the library of the College of Surgeons, Lincoln's-inn-fields.

J. H. S. shall receive a private note. Our correspondent is unnecessarily alarmed. A surgeon should be consulted, who would very soon effect a cure.

ST. GEORGE'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—Allow me to call your attention to two items in accompanying accounts of St. George's Hospital for 1865—viz.: Subscriptions, annual, £4573 17s.; collector's poundage, £245 9s. It would thus appear that the collector's poundage exceeds considerably five per cent. on the total of the subscriptions. I ask you to compare the nature of his duties and his responsibilities with those of a land agent, and I know very few of the latter who are paid five per cent. on the rents of an estate. In addition, I have little doubt that many governors, like myself, pay their subscriptions through their bankers to the banker of the hospital, and that consequently a large proportion of the subscriptions do not pass through the hands of the collector.

I am, Sir, your obedient servant,

London, April 7th, 1866. A GOVERNOR OF ST. GEORGE'S HOSPITAL.

Rinderpest.—Dr. Farr's letter on "Rinderpest" will be found in Dr. Lankester's *Journal of Social Science* for April.

A Student.—The gentleman named is surgeon to King's College Hospital.

One Duped.—We cannot advise. Consult a solicitor. The money extorted would, no doubt, be immediately refunded.

COMMUNICATIONS from Dr. Newton Heale, Mr. J. R. Lane, Mr. Berkeley M. Hill, Dr. H. Osborn, Dr. J. G. Davey, and from our Liverpool correspondent, are deferred until next week.

A Sufferer.—According to the last report issued by the Devonshire Hospital and Buxton Bath Charity, the medicinal action of the Buxton mineral waters, whether used as baths or drunk, has been famous since 1573 in relieving conditions of a rheumatic or gouty character. The water is discharged from several openings in very large quantities at the temperature of 82° Fahr. It is charged with nitrogen, probably in a higher degree than is any other mineral water, being estimated by Playfair to contain 306 cubic inches per gallon at the moment of issue, whilst Muspratt gives 604 cubic inches to a like quantity. The water has otherwise alkaline, earthy, and saline properties, is very detergent and softening to the skin, free from odour and disagreeable flavour, is clear and bright in appearance, and "of a singularly beautiful faintly blue colour."

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. J. R. Lane; Dr. Russell Reynolds; Mr. Maunder; Dr. Sedgwick; Dr. Burder, Clifton; Dr. Meadows; Dr. Fotherby; Dr. Filch; Mr. Hodson; Mr. Ward; Mr. Fry; Mr. Atkinson; Mr. Bromley, Church Stretton; Mr. J. Fowler, Wakefield; Mr. Horsfall; Dr. Roberts; Mr. Hooper; Dr. Evans, Liverpool; Mr. Willis; Mr. Macilwain; Dr. Fox, Scarborough; Mr. Harley; Dr. Pitt; Mr. Steele, Erith; Dr. Hickman; Mr. Greening, Manchester; Dr. Heale, Winchester; Mr. Lloyd; Mr. Garlick, Halifax; Mr. Moore; Dr. Mushet; Mr. Hickson; Mr. Tallack; Mr. Kilbrick; Mr. Merton; Dr. Dixon, Gresford; Mr. Barton; Mr. Jefferson; Mr. Greenway, Sandy; Mr. Hill; Mr. Baynham; Dr. Denny; Mr. Godfrey; Dr. Woodward, Worcester; Dr. Thomas, Menai Bridge; Mr. Richards; Mr. Cooper, Sheffield; Messrs. Newbery and Son; Dr. Gill; Mr. Taylor; Mr. Earl; Mr. Reed; Mr. Richardson, Amble; Dr. Hayward; Dr. Dalton, Llandudno; Mr. Goodiff; Mr. Baxter Langley; Mr. Hawes; Mr. Dunn; Mr. Ransom, Darlaston; Mr. Russell, Accrington; Dr. Morgan, Manchester; Dr. Cook, Manningtree; Dr. Davey, Northwoods; Dr. Ainslie, Tientsin; Dr. Lilley; F. J.; Miserimus; A. B.; Pall-mall; A Mofussilite; M. F. B.; Collega, Christiania; A Governor of St. George's Hospital; K. R.; F. B.; The Cork Medical Protective Association; Medicus, Lancashire; Elbe; R. B.; Ignoramus; E. J. H.; A Country Medical Officer; *&c. &c.*

THE *North British Advertiser*, the *York Star*, the *Glasgow Morning Journal*, the *Stockton Gazette*, and the *Harrogate Advertiser* have been received.

Medical Diary of the Week.

Monday, April 16.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM.—Operations, 9 A.M. and 1½ P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Du Bois Reymond, "On Muscular Contraction."
MEDICAL SOCIETY OF LONDON.—8 P.M. Clinical Discussion.—Dr. Broadbent, "On Chorea."

Tuesday, April 17.

GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Frankland, "On the Non-Metallic Elements."
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M.

Wednesday, April 18.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Du Bois Reymond, "On Muscular Contraction."
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. B. W. Richardson: "Physical Researches in Pathology and Therapeutics."
HUNTERIAN SOCIETY.—8 P.M. Dr. J. Braxton Hicks: "Remarks on the Local Treatment of Malignant Diseases of the Uterus."

Thursday, April 19.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
LONDON SURGICAL HOME.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Frankland, "On the Non-Metallic Elements."
HARVEIAN SOCIETY OF LONDON.—8 P.M. Dr. H. C. Stewart: "Some further Remarks on Embolism of the Great Vessels of the Heart."

Friday, April 20.

WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. B. W. Richardson: "Physical Researches in Pathology and Therapeutics."
ROYAL INSTITUTION.—3 P.M. Mr. G. Macfarren, "On the Music of the Church of England."

Saturday, April 21.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. George Scharf, "On National Portraits."
METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—7½ P.M.